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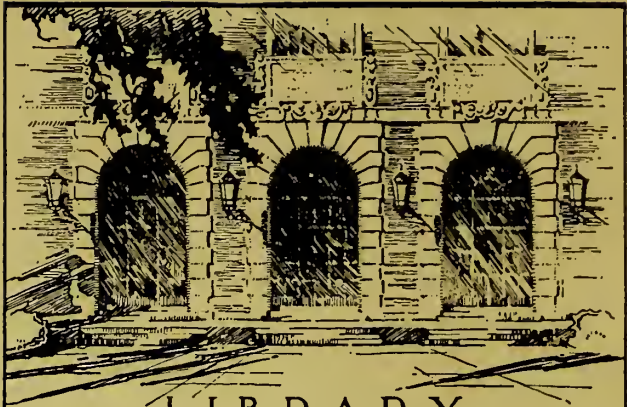
—BY—

HON. CARTER H. HARRISON,

Mayor of Chicago, 1879-1887.

Chicago, April 5th, 1887.





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## ORDER OF ARRANGEMENT.

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- I.—MESSAGE OF THE MAYOR.
- II.—REPORT OF BOARD OF HEALTH.
- III.—REPORT OF SCHOOL BOARD AND SUP'T PUBLIC SCHOOLS.
- IV.—REPORT OF AUDITOR.
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- XIII.—REPORT OF ENGINEER JAMES RIVER IMPROVEMENT,





THIRD

ANNUAL MESSAGE

OF THE

MAYOR OF RICHMOND,

WITH

Accompanying Documents.



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## Third Annual Message.

MAYOR'S OFFICE,  
RICHMOND, March 1st, 1873.

*To the City Council :*

GENTLEMEN—The 10th section of the City Charter imposes on the Mayor the duty of communicating to you annually, “as soon as may be after the commencement of the fiscal year, a general statement of the situation and condition of the City, in relation to its government, finances and improvement, with such recommendations as he may deem proper.”

This duty is less onerous this year than usual, by reason of a wise regulation of the Council, requiring the various reports of the heads of departments to be made directly to the Mayor, and in time to enable him to communicate them to you with his annual message.

The general prosperity of our people during the past year is a matter of just congratulation. The return of personal property for taxation shows an increase of about two millions (\$2,000,000) of dollars over the preceding year, and if the prices obtained for real estate at public sale are a fair index of worth, I am satisfied that a new assessment of the realty of the city would show an increase in its value to an amount at least as great.

During the year many events have transpired which have brightened the prospects of Richmond.

The gap, so long and so inexcusably existing in railroad communication with the North, has been filled by the construction of a road from a point beyond Fredericksburg to Washington. The connections of the Danville railroad, opening to us the great cotton region of the Gulf States, are advancing to an early completion. Our river depth has been so increased that vessels now easily reach our dock, of a draft four feet greater than could approach our wharves last year; and finally, the dream of Washington of a line of communication uniting the James river with the Ohio, has been realized by the completion on the 29th of January, of the Chesapeake and Ohio Railroad, which places the minerals and grain of the North-West within reach of our manufactories and mills.

In addition to these sources of congratulation, it is worthy of note that we have been unusually exempt not only from those terrible accidents involving loss of life, which have been of such frequent occurrence in the recent history of Richmond, but also from fire, pestilence, and those great crimes of violence and fraud, which have been almost epidemic throughout the cities of the land.

#### FINANCES.

The financial condition of the city is not as satisfactory as I have heretofore had the honor to report it.

The bonded debt of the city, which on the 31st of January, 1872, was two millions nine hundred and ninety-nine thousand two hundred and eighty-five dollars, (\$2,999,285) was, on the 31st of January, 1873, three millions four hundred and eighteen thousand five hundred and three dollars. (\$3,418,503) an increase of four hundred and nineteen thousand two hundred and eighteen dollars, (\$419,218.) This sum must be diminished however, by thirty-five thousand seven hundred dollars (\$35,700) of six per cent. bonds hypothecated and not yet returned.

Our Bills Payable account reaches the unprecedented figure of two hundred and thirty-five thousand seven hundred and fifty-two dollars, (\$235,752) with a balance of appropriations still due, amounting to two hundred and eighty-six thousand eight hundred and ninety-eight dollars (\$286,898) more.

To meet these two items and the general expenditures of the city for the current year, it is estimated by the Auditor that a sum of one million three hundred and fifty thousand three hundred and thirty-seven dollars (\$1,350,337) will be required. Of this sum the following items are payable in bonds :

Extension of the Water Works,	-	-	-	\$159,037
James River Bridge,	-	-	-	25,000
Improvement of James River,	-	-	-	56,407
				<hr/>
Aggregate,	-	-	-	\$240,444

This leaves to be raised by taxation or otherwise, the sum of one million one hundred and nine thousand eight hundred and ninety-three dollars (\$1,109,893 )

The estimated receipts from other sources than

taxes and licenses, are	-	-	-	\$334,400
Receipts from taxes and licenses at the present				
rates,	-	-	-	500,000
				<hr/>
Aggregate,	-	-	-	\$884,400

Leaving to be provided for, three hundred and twenty-five thousand four hundred and ninety-three dollars. To meet this deficit three ways are open—

1. The easy but profligate way of a further issue of bonds.
2. An increase of taxation.
3. A reduction of the city's expenses.

In my judgment neither of these means should be relied on alone, but the burden distributed between them.

It will be observed in the report of the City Engineer, that the expenses on account of streets during the past fiscal year amounted to one hundred and twenty-eight thousand five hundred and twenty-three dollars (\$128,523.) I see no reason to change the opinion, I have heretofore uniformly expressed, that at least two-thirds of this charge should be borne by the citizens for whose especial benefit it is incurred, and to whose especial profit it enures.

In the next place, I do not see how an increase, to some extent, in the rate of taxation is to be avoided. A new assessment and accurate and just valuation of the real estate of the city, would probably achieve the same end, and achieve it with more justice to individuals; but in one way or the other, the property of the city will, seems to me, have to bear an enlarged burden. The business of the city is now, I think, sufficiently taxed; for while it is true that the whole revenue derived from licenses is only thirty thousand dollars, it is likewise true that this is, in great degree, borne by a small and comparatively poor class, who would, by an assessment rate which their wealthier neighbors could bear, be taxed out of business.

And, in the third place, I think a large portion of the Bills Payable account may well be provided for by an issue of bonds, reluctant as I am to see the permanent burthens of the people thus increased.

In this connection, I must be indulged to express most respectfully the opinion, that with the authority to sell bonds to meet the indebtedness of the city, the borrowing of money at the rate of twelve per cent. and a commission, on the city's negotiable paper amply secured by hypothecation, is a costly source of revenue. Of the \$235,762 of bills payable, due by the city, \$158,426 are reported as issued in payment of loans. If indebtedness like this is ultimately to be met by the issue

of bonds, it would be better to meet it at once, even though the bonds should be sold for one or two per cent under the present market value. The discount and interest on the bills payable reported, is set down at \$15,000, representing a loss of 7 per cent., which might have been easily met by a loss of two per cent. on the sale of sufficient bonds.

It is unfortunate that the city's bonds, issued for other purposes, come into competition—and unfavorable competition—in her own market with those issued for her own purposes. A broker who has city bonds for sale for the city under regulations constraining him to demand 80 and interest, and allowing him only half per cent. commission, must be something more than human if he exhibits equal zeal in disposing of these as of other city bonds placed in his hands by an Internal Improvement Company, with a commission twice or thrice as large.

The collection of the poll tax seems to be almost impossible. Of the eleven thousand two hundred and forty-two (11,242) polls listed for the capitation-tax, less than four thousand had paid their tax up to the middle of February. The great majority of the delinquents are negroes, who appear to confound their services at the polls with the payment of the poll-tax.

#### THE JAMES RIVER IMPROVEMENT.

The very interesting report of Major W. G. Turpin, Engineer of the James River Improvement, is presented herewith. It shows the expenses on all accounts, for the thirteen months expiring December 31st, 1872, to have been \$92,230, of which \$35,499 was for construction, making the working expenses \$56,731. The appropriation made by the United States has been expended in concert with that made by the Council, to the manifest advantage of the work. The shoalest, and, as experiment proved, the most difficult reach

in the river—that from Rocketts reef to the brick-yard, on which formerly the greatest depth at mean high tide, was less than eleven feet, has been excavated so as to afford throughout its length a channel seventy feet wide by sixteen feet deep. During the year it is confidently predicted that vessels drawing 15 feet, will be able, at mean high tide, easily to reach our wharves. When the necessities and the capital of the owners of river farms will enable them to replace the dykes destroyed during and since the war, this depth will be materially enhanced by confining within the river banks the vast volume of water which, at every rise of the tide, is wasted, so far as river depth is concerned, by being spread over the adjacent meadows. The Engineer recommends the straitening of the course of Shockoe Creek, to prevent the great washing of the banks, which now follows every heavy rain, and this improvement would be found valuable also on sanitary grounds. This stream is the receptacle of a great quantity of offal of various kinds, which in times of flood, is washed up on its banks, and at all times is obstructed in its flow to the river by its windings.

A small annual expense, estimated by the Engineer not to exceed \$15,000, will keep the river clear when it is once excavated, and ensure a permanent depth of sixteen or eighteen feet. At present, vessels drawing  $12\frac{1}{2}$  feet, can, at mean high tide, reach our wharves. The obstructions at Warwick's Bar and Drewry's Bluff, have been completely removed, and the Dutch Gap canal has been in constant use.

#### WATER.

The report of the Superintendant of the Water Works shows the receipts of the past year to have been \$58,962, while the disbursements were \$94,778. This excess is accounted for by the large items of expenditure chargeable to construction account. \$41,245 were expended on enlarge-

ment of the works, and \$21,223 in extension of mains, while over \$10,000 were expended for extension on Oregon Hill and Clay street. Deducting these, the running expenses will be reduced to less than \$22,000. Even with these deductions the net income of the department does not amount to more than  $3\frac{1}{2}$  per cent. of the estimated value of the works ; a fact which shows that if the consumers of gas are taxed for the general public, the general public is taxed for the consumers of water.

For many years there have been repetitions of seasons of such high water in the river as to stop the revolutions of the wheels at the Pump-house, to the great inconvenience of the people and to the hazard of the city, in case of fire. Arrangements are now in progress which will remove this risk altogether ; and before the rainy season of next fall, a turbine-wheel will be in operation, which will ensure continuous work at the Pump-house, irrespective of the condition of the river. This, with the new reservoir under contract, will, for many years to come, meet every requirement in the matter of water supply.

#### HEALTH.

The report of the Board of Health will be found unusually full, both of statistics and suggestions. I venture to supplement but one of these—the one respecting an ordinance preventing the conduct of manufactories within the city, whose processes or productions are detrimental to the public health. If the Council should deem it wise to legislate on this subject, I recommend that it go further and prevent the storage for sale within the city of the deleterious products. Some of the manipulated fertilizers, for example, are more apt to imperil life than gunpowder, and as richly demand storage “without the walls.” I very heartily second the suggestion that the compensation of the members of the Board should

be placed at a figure bearing some relation to their trouble and the value of the service rendered.

The very gratifying success with which the spread of small-pox was prevented during the present winter—the second consecutive year of its appearance—was a service of whose value no estimate can be made, save by a comparison with the terrible experience of Washington, Baltimore and Philadelphia, and the unhappy results in some counties of our Commonwealth.

#### THE FIRE DEPARTMENT.

The report of this department covers a period of but nine months. Hereafter, in pursuance of an ordinance of your body, it will date from a like period with the reports of other branches of the public service. The loss by fire during these nine months amounted to \$80,330, a sum equal to about one-fifth of one per cent. of the taxable property of the city. During the nine months but ten (10) fires of any consequence occurred, and the general efficiency of the department is justly commended by the Chief. I suggest the experiment of one or more of the portable fire extinguishers now coming into use elsewhere, by way of testing their efficiency. That there is a period in every conflagration where a timely bucket of water would extinguish it, seems so obvious as to be trivial; but the practical application, in the shape of cheap, portable and very active extinguishers of flame is of very recent origin, though destined, I believe, to be among the most beneficial inventions of our times. During the year the fire alarm telegraph was of indispensable service—a derangement occurring but once at a time of fire. I concur in recommending the establishment of a large central alarm bell, both for the reasons stated by the Chief, and for the further reason that the simultaneous striking of several bells often renders it impossible to ascertain the box.

### THE ALMS-HOUSE.

The statistics of this department will be found in greater detail than heretofore, and a different system of accounts having been adopted, as promised in my last message, the financial information is, for the first time, satisfactorily exhibited. During the year an average of 237 paupers was fed at a cost *per capita* of \$12 34. The admissions were 429; an increase of 89 over the preceding year. During the year 2,356 bushels of meal and 644 cords of wood was distributed to the poor not in the Alms-house—a slight falling off from the preceding year.

The same cleanliness and care heretofore commended in the conduct of the Alms-house, continue to be observable; and I have no recommendation to make with respect to this department, except that some light labor be introduced, to give employment to the large proportion of inmates who are capable of thus contributing something to their own support. The experiment would only cost the purchase of a small quantity of raw material, and the hiring of the skilled labor of one person to instruct and superintend. It would diminish expense, conduce to health, and might render the Alms-house less attractive to some who seek it simply as a refuge from labor.

### THE POLICE.

With the single exception of the great loss of time by sickness, amounting to 1,235 days during the year, I have to report the condition, conduct and results of this department as entirely satisfactory. During the year I had occasion to issue a letter to the magistrates, chiefly directed to the remedy of certain abuses which were noticeable in the criminal business entrusted to them—abuses for which the police were, in some degree, responsible; and I have the satis-

faction of knowing that the suggestions were appreciated by the magistracy and police, and honored by a very general concurrence.

The duties of this branch of the city's service are discharged under the eye of the people, and are exhibited in the gratifying public order and the sense of security which universally prevail. With fewer exceptions than is usual in similar organizations, the Richmond police, officers and men, are a sober, efficient, faithful and self-respecting body, of whose good qualities the peace and comparative freedom from great crimes of our city are a complete vindication.

### THE STREETS.

The report of the Engineer's department will be found to consist exclusively of the tables showing the work and expenditures under this head. They are unaccompanied by any suggestions, because of the ill health of the efficient and faithful officer at the head of this branch of the public service. I see no reason to change the opinion heretofore expressed, that unless some plan is devised to lighten the burden of these improvements on the public treasury, and place it, where, in my judgment, it belongs—on the shoulders mainly of those whose property is mainly benefitted by them, the cost to the city will soon be alarming.

For the year ending January 31st, 1869, the expenses of this department were \$36,984. For the past fiscal year they were \$128,523; and this sum will be steadily increased to the serious embarrassment of the finances. I believe there are few cities of the size of Richmond in the country which continue this system of public improvement—so far as I know, none.

The narrowness of Cary street from 13th East, is an inconvenience which will soon be intolerable. I recommend

that it be widened by diminishing the foot way one side and by dispensing with a gutter—in other words, permitting the surface to be graded to the curbstone, and not to a point eighteen inches short of the curbstone. I see no reason for any curvature of surface at the point indicated, the grade from West to East being enough for drainage. In the heavy traction for which that street is, and will continue to be used, the relief afforded by a horizontal line of draft is well worth securing. The taking off of three feet of walk, with the improvement of the surface as indicated, would add, in effect, six feet to the width of this street—a relief of the greatest service in the busy season.

#### THE GAS WORKS.

The total receipts of this department during the year, were \$161,833; the total expenditures, \$146,002—excess of receipts, \$15,831. To this excess of receipts the Superintendent properly adds the public consumption of gas, which, at private rates, would have amounted to \$45,578; and a loss by leakage for which the Chesapeake and Ohio railroad is responsible, amounting to \$210. These, with other proper credits make the revenue from this source, amount to \$63,888, an interest of about eight per cent. on the estimated value of the Works. The Works were never in as efficient a condition as at present, and unless some accident intervenes, I am persuaded the next report will be even more satisfactory. There is every reason to believe that we shall be able to save a considerable sum in the cost of coal, and that the consumption will steadily increase. The private consumption of 1871 was nearly six millions of cubic feet more than that of 1870, and the private consumption of 1872—over six millions four hundred thousand cubic feet in excess of that for 1871.

## THE PUBLIC SCHOOLS.

Since my last report the demand for more school accommodations in the western portion of the city, has been met by the completion of the Madison school, and in the eastern portion, by the opening of the Nicholson school. A most eligible site has been secured for the High and Normal School, and the building is now under contract and will be ready for our next session. I confidently anticipate at an early day, such an extension of our public school course as will make our system a stepping-stone to a collegiate course for those who have the means and inclination to seek it. Until this is achieved, the system is imperfectly performing its work, however gratifying its results.

I refer to the report of the School Board for statistics of progress.

In conclusion, gentlemen, allow me to assure you that the grateful acknowledgements I here make of the unmerited consideration you have been pleased to extend to such suggestions as I have heretofore made, and the cordial good feeling you have been so kind as to manifest in our intercourse, are not the formal phrases of official etiquette, but the very sincere, however inadequate, expression of sentiments profoundly entertained by

Your friend and fellow-citizen,

A. M. KEILEY,  
*Mayor.*

# Annual Reports.



ANNUAL REPORT

OF THE

BOARD OF HEALTH,

OF THE

*Births, Marriages and Deaths,*

IN THE

CITY OF RICHMOND,

For the Year 1872.



# Annual Report.

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*Office of the Board of Health,*

RICHMOND, March 1st, 1873.

*To the Honorable Mayor and*

*Council of the City of Richmond :*

GENTLEMEN—We respectfully submit our Second Annual Report, containing statistics of the births, marriages and deaths in this city during the year 1872, with suggestions on subjects to which we desire to call your special attention.

We offer our thanks to the Clerk of the Hustings Court of this city, and the Clerk of Henrico County Court, for facilities afforded us in preparing marriage statistics.

The reports of the several Vaccine Physicians, in tabular form, are annexed, although much of their work was done since the first of January. We would be derelict were we to omit particular mention of the services rendered by most of these medical gentlemen, and the zeal and interest displayed in the discharge of their duties. Great difficulty was experienced in arranging the districts equally, and as a consequence some were compelled to perform more arduous duty.

The reports of the Sanitary Inspectors are herewith appended. The Board take great pleasure in commending these officers for the faithful performance of their duties ; the discharge of which has not, so far as we have been informed, been attended with any undue exercise of authority, but has

been marked by evidences of a proper regard for the feelings of our citizens. They have incurred personal risk by attempting to stay the progress of small-pox, in seeing that the orders of the Board as to disinfectants were properly carried out.

Through the kindness of a gentleman residing on Franklin street, between Fifth and Sixth streets, we are enabled to present with this report, tables prepared by him, exhibiting the range of the thermometer for each day of the year. His observations were made at 8 A. M. and 10 P. M.

We are indebted to Col. E. T. D. Myers for a statement of the rain-fall for each month of the year.

***MEMBERS AND OFFICERS***

OF THE

**BOARD OF HEALTH,**

OF THE

**CITY OF RICHMOND.****MEMBERS OF THE BOARD.**

J. G. CABELL, M. D., PRESIDENT.

W. H. TAYLOR, M. D.

F. D. CUNNINGHAM, M. D.

**SANITARY INSPECTORS.**

W. J. WHITT, 1st District.

WM. ORME, 2d District.

W. N. SMITH, 3d District.

**VACCINE PHYSICIANS.***First District.*

T. V. BROOKE, M. D., 3000 Main street.

*Second District.*

T. J. RIDDELL, M. D., 1701 Main street.

*Third District.*

B. G. MCPHAIL, M. D., 14th st., bet. Main and Franklin.

*Fourth District.*

J. A. SIMONS, M. D., 2701 Franklin street.

*Fifth District.*

L. W. WOODSON, M. D., 115 Seventeenth street.

*Sixth District.*

W. A. LEE, M. D., Ford's Hotel.

*Seventh District.*

J. C. DEATON, M. D., 100 east Main street.

*Eighth District.*

J. L. POWELL, M. D., 4 west Marshall street.

*Ninth District.*

J. C. DEATON, M. D., 100 east Main st.

*Tenth District.*

JENIFER GARNETT, M. D., 209 east Grace street.

*Eleventh District.*

C. A. BRICE, M. D., cor. Marshall and Brooke Avenue.

*Twelfth District.*

J. N. UPSHUR, M. D., cor. Franklin and 7th sts.

## BIRTHS.

The number of births recorded during the year 1872 was 1,776 ; number of deliveries, 1,749 ; number of twin births, 27—being an increase of 150 births, 147 deliveries, and three births over those of the year 1871. *The ratio of births to population*, was one to 33.78.

TABLE N.o 1.

Number of White Males.....	512	
“ White Females.....	470	
Total of whites.....	—	982
Number of Colored Males.....	417	
“ Colored Females.....	377	
Total of Colored.....	—	794
Total.....		1,776

The following table exhibits the number born in each month and each quarter of the year 1872 :

TABLE No. 2.

January.....	133	April.	133	July	134	October.	157
February .....	135	May.	119	August.	172	November.	166
March.....	125	June.	137	September.	157	December.	208
1st Quarter.....	393	2d Quarter.	389	3d Quarter.	463	4th Quarter.	531

The largest number of births in any one month was in December, 208, and the least in May, 119.

## NATIVITY OF PARENTS—BIRTHS IN 1872.

TABLE NO. 3.

Both parents born in the United States.....	1,331
“ “ England.....	6
“ “ Germany.....	62
“ “ Ireland.....	51
“ “ Italy.....	1
“ “ Poland.....	2
“ “ Prussia.....	10
“ “ Scotland.....	3
Both parents mixed foreign.....	20
Father born in the United States, mother foreign.....	13
Mother “ “ father foreign.....	101
Mother “ “ father unknown.....	144
Father and mother unknown.....	5
Twenty-seven twin births, each counted separate.....	27
Total.....	1,776

The number of children born, whose parents were natives, was 1331. The number of children whose parents were both of foreign birth was 155. The number of children, one of whose parents was native and one foreign, was 114. With some propriety the number of children whose mothers were born in the United States, whose fathers were unknown, viz: 144, may be added to those whose parents were natives, viz: 1,331—making 1,475

## TWIN BIRTHS.—1872.

TABLE No. 4.

NATIVITY OF PARENTS.	Both Males.	Both Females.	Male and Female.
Both parents born in the United States (white)...	3	2	2
“ “ “ (colored) ..	5	4	4
“ “ Germany.....	.....	2	.....
“ “ Ireland.....	.....	1	1
Mother born in U. S., father foreign.....	1	1	.....
“ “ “ father unknown (white) ..	1	.....	.....
	10	10	7

The proportion of twins to deliveries was one in 64. In the year 1871 the proportion was one in 66. In Providence, Rhode Island, for the year 1870, the proportion was one in 61. In Boston, in the year 1871, the proportion was one in 112.

The following table shows the number of still births :

STILL BIRTHS.—1872.

TABLE No. 5.

	White	Col'd	Total,		White	Col'd.	Total.
January.....	4	10	14	July.....	4	8	12
February.....	6	12	18	August.....	6	9	15
March.....	2	4	6	September.....	9	10	19
April.....	4	9	13	October.....	2	11	13
May.....	12	7	19	November.....	4	8	12
June.....	3	17	20	December.....	3	12	15
					59	117	176

The proportion of still births to those born alive, was one to ten. The proportion of white still births to whites born alive, was one to seventeen ; the proportion of colored still births to colored born alive, was one to six.

In the year 1871, the proportion of still births to those born alive, was one to thirteen. The proportion of white still births to whites born alive, was one to twenty-one ; the proportion of colored still births to colored born alive, was one in nine.

## MARRIAGES.

The number of marriages solemnized during the year 1872, in this city, was 567—being an increase of seventy over the number for the year 1871. The following table will show the number in each month and the whole year. Whites, 325; colored, 242:

TABLE No. 6.

MARRIAGES.	White	Col'd.	MARRIAGES.	White	Col'd.
January.....	29	11	July.....	13	17
February.....	18	14	August.....	16	16
March.....	13	11	September.....	19	24
April.....	26	14	October.....	44	28
May.....	30	15	November.....	47	24
June.....	25	18	December.....	45	50
	141	83		184	159

Total—White and Colored.....567,

## MARRIAGES—BIRTH PLACES OF THE PARTIES.

TABLE NO. 7.

BIRTH PLACES OF GROOMS.	BIRTH PLACES OF BRIDES.									
	Richmond, Va.	Other places in State.	Other States.	England and Wales.	Ireland.	Scotland.	Germany.	France.	Prussia.	Total.
Richmond, Va.....	67	45	9	2	2	....	....	....	....	125
Other places in State...	94	204	15	....	2	1	1	....	1	318
Other States.....	26	25	9	1	....	2	....	....	....	63
England and Wales.....	5	....	1	2	....	....	....	1	....	9
Ireland.....	4	2	....	1	8	....	....	....	....	15
Scotland.....	....	2	....	....	....	2	....	....	....	4
Germany.....	7	2	3	....	....	....	5	....	1	18
France.....	....	1	....	....	1	....	....	....	....	2
Prussia.....	4	1	2	....	....	....	1	....	5	13
Total.....	207	282	39	6	13	5	7	1	7	567

## MARRIAGES—AGES OF THE PARTIES.

TABLE NO. 8.

AGE OF GROOMS.	AGE OF BRIDES.							Total.
	Under 20.	20 to 25	25 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	
Under 21.....	2	7	.....	.....	.....	.....	.....	9
21 to 25.....	67	105	8	1	.....	.....	.....	181
25 to 30.....	31	106	30	8	.....	.....	.....	175
30 to 40.....	8	59	35	20	1	.....	.....	123
40 to 50.....	3	15	12	20	5	.....	.....	55
50 to 60.....	.....	.....	3	9	6	1	1	20
60 to 70.....	.....	.....	.....	1	3	.....	.....	4
Total.....	111	292	88	59	15	1	1	567

## MARRIAGES—OCCUPATION OF THE GROOMS.

TABLE No. 9.

Laborers.....215	Mariners ..... 3	Bricklayers..... 5
Mechanics.....131	Hotel Keepers..... 4	Blacksmiths.....15
Merchants... .. 64	Lawyers. .... 1	Carpenters .....32
Farmers..... 25	Clerks .....24	Pol'cemen..... 3
Tobacconists ..... 9	Barbers..... 6	Manufacturers..... 3
Bakers..... 1	Shoe Makers..... 6	Printers..... 6
Druggists..... 4	Clergymen ..... 2	Moulders ..... 8
<u>449</u>	<u>46</u>	<u>72</u>
Total.....567.		

## MORTUARY REPORT.

The number of deaths in the city during the year 1872, was one thousand seven hundred and fourteen, (1,714;) whites, 814; colored, :900 still born, 176; whites, 59; colored, 117.

NATIVITIES.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
British America.....	....	....	2	....	2	....
England.....	6	....	2	....	8	....
France.....	3	....	....	....	3	....
Germany.....	24	....	20	....	44	....
Ireland.....	24	....	19	....	43	....
Italy.....	3	....	....	....	3	....
Scotland.....	9	....	3	....	12	....
United States.....	374	485	317	415	691	900
Unknown.....	4	....	4	....	8	....

## RECAPITULATION.

SEX.	Whites.	Colored.
Males.....	447	485
Females.....	367	415
Total.....	814	900

## COLOR.

White male.....	447
White female.....	367
Colored male.....	485
Colored female.....	415
Total.....	1,714

CONDITION.	Whites.	Colored
Single.....	498	592
Married.....	192	164
Widowers.....	32	19
Widows.....	66	60
Unknown.....	26	65
Total.....	814	900

## BY WHOM CERTIFIED.

	Whites.	Colored.
By regular physicians.....	732	655
By irregular practitioners.....	12	12
By coroner.....	43	86
By members of the Board of Health.....	27	147
Total.....	814	900

LOCALITY.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
City at large.....	12	6	7	8	19	14
Marshall Ward.....	58	54	48	49	106	103
Jefferson Ward.....	98	89	94	72	192	161
Madison Ward.....	60	43	52	63	112	106
Monroe Ward.....	73	44	62	50	135	94
Clay Ward.....	63	44	50	32	118	76
Jackson Ward.....	39	123	40	109	79	232
City Almshouse.....	56	48	13	30	39	78
Smallpox Hospital.....	.....	1	.....	.....	.....	1
Medical College Hospital.....	12	6	1	.....	13	6
State Penitentiary.....	1	26	.....	2	1	28
City Jail.....	.....	1	.....	.....	.....	1

AGES.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
1 day to 30 days.....	41	55	28	43	69	98
1 month to 6 months.....	35	47	21	31	56	78
6 months to 1 year.....	45	39	23	34	68	73
1 year to 3 years.....	65	75	57	70	122	145
3 to 5 years.....	11	18	19	14	30	32
5 to 10 years.....	14	18	14	15	28	33
10 to 20 years.....	16	26	14	33	30	59
20 to 30 years.....	39	53	35	49	74	102
30 to 40 years.....	34	36	31	27	65	63
40 to 50 years.....	36	25	29	16	65	41
50 to 60 years.....	45	28	23	21	68	49
60 to 70 years.....	27	32	30	14	57	46
70 to 80 years.....	29	17	28	20	57	37
80 to 90 years.....	4	8	8	16	12	24
90 to 100 years.....	1	2	3	5	4	7
Over 100 years.....	.....	1	1	1	1	2
Unknown.....	5	5	3	6	8	11

## MORTALITY FOR EACH MONTH OF THE YEAR.

MONTHS.	MALES.		FEMALES.		TOTAL.	
	W.	C.	W.	C.	W.	C.
January .....	32	27	13	23	45	50
February.....	28	24	21	36	49	60
March.....	25	28	22	27	47	55
April.....	29	42	18	24	47	66
May.....	17	22	22	24	39	46
June .....	40	34	30	30	70	64
July.....	51	66	50	49	101	115
August.....	40	52	38	48	78	100
September.....	38	51	33	37	71	88
October .....	51	41	39	34	90	75
November.....	38	41	31	37	69	78
December.....	58	57	50	46	108	103

## CAUSES OF DEATH.

CAUSE.	Males.		Females.		Total.	
	I. ZYMOTIC.					
	ORDER I.—MIASMATIC DISEASES.		W.	C.	W.	C.
Smallpox .....	2	1	....	....	2	1
Measles .....	11	7	8	5	19	12
Scarlatina .....	1	....	1	....	2	....
Diphtheria .....	11	2	11	1	22	3
Croup (Pseudo-Membranous) .....	5	5	4	5	9	10
Whooping Cough .....	1	1	....	2	1	3
Typhoid Fever .....	16	19	15	18	31	37
Continued Fever .....	....	1	1	1	1	2
Congestive Fever .....	4	1	4	2	8	3
Erysipelas .....	....	1	....	....	....	1
Puerperal Fever .....	....	....	7	3	7	3
Dysentery—(Acute) .....	13	13	11	7	24	20
(Chronic) .....	3	....	4	....	7	....
Diarrhœa (Acute) .....	11	14	5	5	16	19
(Chronic) .....	10	11	8	7	18	18
Cholera Infantum .....	31	15	24	21	55	36
Cerebro-spinal Meningitis .....	9	15	10	6	19	21
Intermittent Fever .....	3	1	....	....	3	1
Remittent Fever .....	1	1	2	....	3	1
Pyæmia .....	....	1	....	....	....	1
Uraemia .....	1	....	1	....	2	....
Other Miasmatic Diseases .....	5	....	1	....	6	....
Order II.—Enthetic or Inoculated.						
Syphilis .....	1	1	....	1	1	2
Order III.—Dietic.						
Starvation (Privation, &c.) .....	....	1	....	1	....	2
Inanition .....	3	4	3	4	6	8
Neglect .....	....	....	....	1	....	1
Purpura .....	2	....	2	....	4	..
Scurvy .....	....	1	....	....	....	1
Alcoholism—						
Intemperance .....	4	....	2	....	6	....
Delirium Tremens .....	3	....	....	....	3	....
Order IV.—Parasitic.						
Worms and other Parasitic Diseases .....	....	1	....	....	....	1
II. CONSTITUTIONAL, Order I—Diathetic.						
Gout .....	1	....	....	....	1	....
Rheumatism .....	....	1	1	....	1	1
Dropsy .....	4	15	4	11	8	26
Cancer .....	2	1	5	....	7	1
“ of Uterus .....	....	....	2	4	2	4
Mortification .....	....	1	....	....	....	1

CAUSES OF DEATH.—*Continued.*

CAUSE.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
<b>Order II.—Tubercular.</b>						
Scrofula.....	1	3	1	5	2	8
Tabes Mesenterica.....	....	4	1	2	1	6
Phthisis Pulmonalis.....	37	65	30	65	67	130
Hydrocephalus.....	2	2	1	2	3	4
Other Consumptive Diseases.....	6	2	1	2	7	4
<b>III. LOCAL.</b>						
<b>ORDER I.—NERVOUS SYSTEM.</b>						
Congestion of Brain.....	10	7	....	2	10	9
Meningitis.....	6	3	5	4	11	7
Cerebritis .....	2	1	2	1	4	2
Softening of Brain.....	3	....	1	....	4	....
Apoplexy.....	11	3	11	3	22	6
Paralysis, general.....	6	4	10	2	16	6
Insanity .....	....	1	....	....	....	1
Epilepsy.....	....	2	1	....	1	2
Sun Stroke.....	1	....	....	....	1	....
Convulsions.....	10	14	8	17	18	31
Tetanus.....	1	2	....	....	1	2
Trismus Nascentium.....	6	7	2	5	8	12
Brain Disease.....	4	1	....	1	4	2
Other Diseases of the Nervous System.....	....	1	....	1	....	2
<b>Order II.—Circulatory System.</b>						
Pericarditis....	....	....	1	1	1	1
Aneurism of Aorta.....	....	....	1	....	1	....
Hypertrophy of Heart.....	....	....	....	1	....	1
Valvular Disease of Heart.....	2	3	2	2	4	5
Dropsy of Heart.....	....	2	....	....	....	2
Heart Disease.....	15	9	12	7	27	16
Other Diseases of the Vascular System....	....	1	3	1	3	2
<b>Order III.—Respiratory System.</b>						
Laryngitis.....	1	....	....	....	1	....
Bronchitis (Acute).....	4	3	5	1	9	4
(Chronic).....	2	....	....	....	2	....
Pleurisy.....	....	1	....	2	....	3
Hydrothorax.....	1	....	....	1	1	1
Congestion of Lungs.....	2	3	4	2	6	5
Pneumonia.....	18	33	25	22	43	55
Asthma.....	....	1	....	2	....	3
Gangrene of Lungs.....	1	....	....	....	1	....
Haemoptysis .....	2	1	1	2	3	3
Other Diseases of the Respiratory System..	2	2	....	....	2	2

CAUSES OF DEATH.—*Continued.*

CAUSE.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
<b>Order IV.—Digestive System.</b>						
Dyspepsia.....	2	....	....	....	2	....
Gastritis.....	2	....	1	....	3	....
Enteritis.....	7	1	5	2	12	3
Cholera Morbus.....	2	2	2	3	4	5
Peritonitis.....	....	3	....	4	....	7
Ulceration of Intestine.....	1	....	1	....	2	....
Hemorrhage from Stomach.....	....	....	1	....	1	....
Ileus, Colic, &c.....	1	....	2	1	3	1
Intussusception.....	....	1	1	1	1	2
Stricture of Intestines.....	....	....	1	....	1	....
Ulcer of Stomach.....	2	....	....	....	2	....
Jaundice.....	3	1	....	1	3	2
Liver Disease.....	3	3	....	2	3	5
Stricture of Esophagus.....	....	1	....	....	....	1
Other Diseases of the Digestive System....	3	....	7	2	10	2
<b>Order V.—Urinary System.</b>						
Nephria (Bright's Disease).....	2	1	....	1	2	2
Diabetes.....	....	1	....	....	....	1
Cystitis.....	1	....	....	....	1	....
Kidney Disease.....	2	1	....	....	2	1
Other Diseases of the Urinary System.....	1	2	....	1	1	3
<b>Order VI.—Generative System.</b>						
Uterus Disease.....	....	....	3	....	3	....
Other Diseases of the Generative System...	1	....	....	....	1	....
<b>Order VII.—Locomotor System.</b>						
Necrosis.....	2	....	....	....	2	....
<b>Order VIII.—Integumentary System.</b>						
Abscess.....	4	....	3	3	7	3
Charbon.....	....	....	1	....	1	....
Tumor.....	2	....	....	....	2	....
Other Diseases of the Integumentary System	....	....	1	....	1	....
<b>IV. DEVELOPMENTAL—Order I.—Children.</b>						
Premature Birth.....	10	4	7	8	17	12
Cyanosis.....	....	....	1	1	1	1
Imperfect Development.....	3	....	1	....	4	....
Other Malformations.....	....	1	....	....	....	1
Umbilical Hemorrhage.....	....	2	....	....	....	2
Teething.....	8	19	7	15	15	34
Other Diseases of this Order.....	....	1	....	....	....	1

CAUSES OF DEATH.—*Continued.*

CAUSE. Order II.—Women.	Males.		Females.		Total.	
	W.	C.	W.	C.	W.	C.
Abortion.....	.....	.....	1	.....	1	.....
Childbirth, (see Puerperal Fever).....	.....	.....	1	2	1	2
Convulsions.....	.....	.....	1	3	1	3
Flooding.....	.....	.....	1	2	1	2
Other Diseases of this Order.....	.....	.....	1	.....	1	.....
Rupture of Uterus.....	.....	.....	.....	1	.....	1
Order III.—Age.						
Old Age.....	12	24	15	31	27	55
Senile Gangrene.....	.....	1	1	.....	1	1
Order IV.—Nutrition.						
Atrophy.....	15	16	10	13	25	29
Debility.....	6	10	9	3	15	13
V. DEATHS BY VIOLENCE.						
Order I.—Accident and Negligence.						
Fractures.....	2	1	.....	.....	2	1
Dislocations.....	1	.....	.....	.....	1	.....
Contusions.....	3	2	.....	.....	3	2
Gunshot Wounds.....	.....	3	.....	.....	.....	3
Penetrating do.....	.....	1	.....	.....	.....	1
Burns and Scalds.....	2	2	2	5	4	7
Poison—Narcotic.....	3	.....	.....	.....	3	.....
Drowning.....	8	2	1	.....	9	2
Suffocation.....	.....	4	.....	.....	.....	4
Other Causes of Violent Death.....	.....	1	.....	1	.....	2
Order II.—Homicide.						
Murder and Manslaughter.....	1	.....	.....	.....	1	.....
Infanticide.....	3	2	1	2	4	4
Order III.—Suicide.						
Poison.....	1	.....	1	1	2	1
Drowning.....	1	.....	1	.....	2	.....
VI.—Causes not Specified or ill-defined..	13	56	12	45	25	101
Total Deaths from all Causes.....	447	485	367	415	814	900

The following table exhibits the percentage of deaths for the various classes of diseases, and of the most prevalent.

CLASSES OF DISEASES.	WHITES.			COLORED.		
	Number of Deaths.	Percentage of deaths on total mortality.	Death rate per 1,000 of population.	Number of Deaths.	Percentage of deaths on total mortality.	Death rate per 1,000 of population.
<b>ZYMOTIC DISEASES—</b>						
Measles .....	19	2.33	.58	12	1.33	.41
Typhoid Fever.....	31	3.81	.94	37	4.11	1.36
Dysentery.....	31	3.81	.94	20	2.22	.74
Diarrhœa.....	34	4.18	1.03	37	4.11	1.36
Cholera Infantum.....	55	6.75	1.07	36	4.00	1.32
Cerebro-Spinal Meningitis.....	19	2.33	.58	21	2.33	.77
Total deaths from <i>Zymotic diseases</i> .....	255	31.33	7.75	190	21.11	7.01
<b>TUBERCULAR DISEASES—</b>						
Phthisis Pulmonalis ....	67	8.23	2.03	130	14.44	4.79
Total deaths from all <i>Tubercular Diseases</i> ....	80	9.32	2.43	152	16.88	5.61
Total deaths from diseases of <i>Nervous System</i> .....	100	12.28	3.04	82	9.11	3.06
Total deaths from diseases of <i>Circulatory System</i> .....	36	4.42	1.09	27	3.00	.99
Total deaths from diseases of <i>Respiratory System</i> .....	68	8.35	2.06	76	8.44	2.80
Total deaths from diseases of <i>Digestive System</i> .....	47	5.77	1.42	28	3.11	1.03
Total deaths from <i>Developmental Class of Diseases</i> .....	110	13.51	3.34	157	17.44	5.79
Total deaths from <i>Accident or Neglect</i> .....	22	2.70	.67	22	2.44	.81
<i>Suicide</i> .....	4	.49	.12	1	.11	.04
Deaths from causes not specified or ill-defined	25	3.07	.76	101	11.22	3.72

Population of City estimated at 60,000—Whites, 32,900; Colored, 27,100.

*Table showing percentage of deaths during different ages, for  
the year 1872.*

AGES.	WHITES.			COLORED.		
	Number of Deaths.	Percentage of deaths on total mortality.	Death rate per 1,000 of population.	Number of deaths.	Percentage of deaths on total mortality.	Death rate per 1,000 of population.
Under 1 year.....	193	23.71	5.86	249	27.33	9.18
1 to 5 years.....	152	18.67	4.65	177	19.66	6.53
5 to 10 years.....	28	3.44	.85	33	3.66	1.22
10 to 20 years.....	30	3.68	.91	59	6.55	2.17
20 to 30 years.....	74	9.04	2.24	102	11.33	3.76
30 to 40 years.....	65	7.98	1.98	63	6.99	2.32
40 to 50 years.....	65	7.98	1.98	41	4.55	1.52
50 to 60 years.....	68	8.35	2.06	49	5.44	1.80
60 to 70 years.....	57	7.00	1.73	46	5.11	1.69
70 to 80 years.....	57	7.00	1.73	37	4.11	1.36
80 to 90 years.....	12	1.47	.36	24	2.66	.88
90 to 100 years.....	4	.49	.12	7	.77	.25
Over 100 years.....	1	.12	.03	2	.22	.07
Unknown. ....	8	.98	.24	11	1.22	.41
	814			900		

Population of City estimated at 60,000—Whites, 32,900 ;  
Colored, 27,100.

# REPORTS OF THE SANITARY INSPECTORS.

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RICHMOND, Jan. 1st, 1873.

DR. J. G. CABELL,

*President Board of Health:*

SIR—I have the honor to submit the following report of my labors as Sanitary Police Inspector for the first Sanitary District, from the 20th April (that being the day I was assigned to this duty,) to the 31st December, 1872, inclusive, viz :

Number of notices served to connect with public sewers,	36
Number of do. complied with,	15
Number of do. to be complied with,	21
Number of premises inspected and notified to trap culvert openings,	106
Number of notices complied with,	63
Number of orders given to have the work executed,	43
Number of notices served to abate nuisances of various kinds,	820
Number of notices served to disinfect premises infected with small-pox,	6
Number of persons reported to the Police Justice for violation of City Ordinances,	33
Number of births recorded by my predecessor, Mr. G. J. Brooks, for the year 1871,	527

Very respectfully,

your obedient servant,

W. J. WHITT,

*Police Sanitary Inspector.*

RICHMOND, Jan. 1st, 1873.

DR. J. G. CABELL,

*President Board of Health :*

SIR—I have the honor to submit the following report of my labors as Sanitary Police Inspector for the Second District for the year 1872 :

Number of births recorded,	387
Number of premises inspected for connection with public sewers,	65
Number of notices served to connect with public sewers,	65
Number of do. complied with,	44
Number of do. to be complied with,	21
Number of premises inspected and notified to trap culverts,	255
Number of notices complied with,	175
Number of orders given to have the work done,	80
Number of notices served to abate nuisances of various kinds,	946
Number of notices served to disinfect premises infected with small-pox,	5
Number of notices served to repair dangerous chimneys,	5
Number of dangerous and dilapidated houses reported,	2
Number of fire-plugs used for washing out offensive gutters and flushing culverts, from 1st May to the 1st of October, (each plug used eight times in each month,)	10

Respectfully submitted,

WM. ORME,

*Sanitary Police Inspector,  
Second District.*

RICHMOND, Jan. 1st, 1873.

DR. J. G. CABELL,

*President of the Board of Health :*

SIR—I have the honor to submit the following report of my labor as Sanitary Police Inspector, for the Third District, for the year 1872:

Number of births recorded for 1871,	712
Number of premises inspected for connection with the public sewers,	304
Number of notices served to connect with sewers,	304
Number of notices complied with,	155
Number of notices to be complied with,	149
Number of premises inspected and notified to trap cul- vert openings,	119
Number of notices complied with,	63
Number of orders given to have the work executed,	56
Number of notices served to abate nuisances of dif- ferent kinds,	1,112
Number of notices served to repair dangerous chimneys,	13
Number of dangerous and dilapidated houses reported,	2
Number of notices served to disinfect houses in which small-pox had existed,	5
Number of fire-plugs used for washing out offensive gut- ters and flushing culverts, from 1st May to 1st Sept'r, (each plug being used eight times in each month,)	10

Respectfully submitted,

W. N. SMITH,

*Sanitary Police Inspector for Third District.*

## REPORT OF THE VACCINE PHYSICIANS.

DISTRICT.	NAMES OF PHYSICIANS.	OFFICE.	Number vaccinated	Primary.	Secondary.	Successful.	Failed.	Not heard from.	White.	Colored.
1st .....	T. V. Brooke.....	3000 Main street.....	780	211	569	373	167	240	252	528
2d .....	T. J. Riddell.....	1701 Main street.....	1705	208	1497	881	601	223	574	1131
3d .....	B. G. McPhail.....	14th, between Main and Franklin.	1550	181	1369	943	232	375	942	608
4th .....	J. A. Simons.....	2701 Franklin Street.....	981	145	836	700	263	18	443	538
5th .....	L. W. Woodson.....	415 Seventeenth street.....	1335	203	1127	1021	103	211	595	740
6th .....	W. A. Lee.....	Ford's Hotel.....	1306	109	1197	482	430	394	407	899
7th and 9th.	J. C. Deaton.....	100 east Cary street.....	1647	132	1515	792	127	728	550	1097
8th .....	J. L. Powell.....	4 <sup>th</sup> west Marshall street.....	765	235	530	334	404	27	334	431
10th .....	Jenifer Garnett.....	209 east Grace street.....	862	136	726	289	346	227	211	651
11th .....	C. A. Brice.....	113 west Marshall street.....	1357	217	1140	336	907	114	461	896
12th .....	J. N. Upsher.....	701 east Graco street.....	743	285	458	182	416	145	186	557
		Totals.....	13031	2067	10964	6333	3996	2702	4955	8076

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
Jan.	1	40 deg.	45 deg.	Rain.	
	2	38	40	Fair.	
	3	40	43	Rain.	
	4	40	40	Cloudy.	Light rain during the day.
	5	35	40	Fair.	
	6	33	40	"	
	7	37	35	Cloudy.	Snow and sleet during the night.
	8	30	30	"	Sleeting all day.
	9	30	30	"	Very damp.
	10	30	34	"	" "
	11	39	50	"	
	12	40	40	Fair.	
	13	45	48	"	
	14	29	25	"	
	15	20	32	"	Quite cold.
	16	25	32	"	
	17	32	32	"	
	18	23	32	"	
	19	32	40	Cloudy.	Rain at night.
	20	34	42	Fair.	
	21	40	34	Cloudy.	
	22	29	40	Fair.	
	23	40	30	"	Rain and snow at 4 P. M.
	24	25	20	Cloudy.	Snow during morning
	25	18	23	Fair.	
	26	23	30	"	
	27	32	21	Cloudy.	Snow, rain and hail during P. M.
	28	35	35	"	Snow during the morning.
	29	27	23	Fair.	Very cold and windy.
	30	17	24	"	" "
	31	15	27	"	" "

Mean average per day for the month, 32 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER.	REMARKS.
	8 A. M.	10 P. M.		
Feb. 1	19 deg.	26	Fair.	
2	24	32	"	Snow at Night.
3	30	30	Cloudy.	Sleeting all day—snow at night.
4	29	40	Fair.	
5	32	40	"	
6	38	45	Rain.	
7	29	32	Fair.	
8	30	33	Cloudy.	Sleeting all day.
9	32	30	Rain.	
10	30	42	Fair.	Rain at 11 A. M.—clear P. M.
11	40	50	"	Very mild.
12	45	45	Rain.	
13	45	45	Cloudy.	
14	30	27	Fair.	
15	12	28	"	
16	25	37	"	
17	35	33	Cloudy.	Snow nearly all day.
18	30	32	"	Clear sunset.
19	29	32	Fair.	
20	32	43	"	
21	35	36	"	
22	34	36	"	
23	29	40	"	
24	37	53	"	Rain at night.
25	50	47	"	
26	35	45	"	
27	37	46	"	
28	33	40	"	
29	34	30	Cloudy.	Snow nearly all day.

Mean average per day for the month, 34 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER.	REMARKS.
	8 A. M.	10 P. M.		
Mar. 1	27 deg.	36 deg.	Fair.	
2	29	24	Cloudy.	Violent snow storm—snow from
3	15	30	Fair.	one to three feet deep.
4	28	29	"	
5	15	23	"	Very cold.
6	15	28	"	" "
7	22	37	"	
8	34	37	"	
9	35	38	Cloudy.	Rain at night.
10	37	38	Chang'ble.	Rain during A. M.—clear P. M.
11	35	33	Cloudy.	Commenced snowing at 12 M.
12	34	34	Chang'ble	Snow during A. M.—clear P. M.
13	28	47	Fair.	
14	48	49	Cloudy.	Shower of rain at night.
15	40	33	Fair.	
16	25	33	"	
17	33	37	Cloudy.	Snow A. M.—rain at night.
18	34	44	Fair.	
19	40	48	"	Very high wind—quite cold.
20	35	25	"	
21	18	32	"	
22	26	32	Chang'ble.	Snow at night.
23	23	38	"	
24	33	37	Fair.	
25	35	44	Cloudy.	Rain during afternoon and night.
26	40	45	"	
27	40	40	Fair.	
28	40	45	"	
29	50	57	"	
30	50	56	"	
31	60	62	Chang'ble.	Wind, rain P. M.—light'ing night

Mean average per day for the month, 35 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER.	REMARKS.
	8 A. M.	10 P. M.		
April 1	45 deg.	47 deg.	Fair.	Very windy.
2	40	50	"	" "
3	45	53	Cloudy.	Apricot trees in bloom.
4	40	45	Fair.	
5	35	47	"	
6	40	55	Cloudy.	Rain at night.
7	50	60	Chang'ble.	
8	55	70	Cloudy.	Very warm—rain in afternoon.
9	70	72	"	Showery,
10	55	60	Fair	
11	55	65	"	
12	55	65	"	
13	60	63	Chang'ble.	Light rain during afternoon.
14	59	57	"	
15	51	50	Rain.	
16	40	45	Fair.	
17	37	50	Chang'ble.	
18	50	53	Cloudy.	Rain and thunder at 8 P. M.
19	55	57	Fair.	
20	55	55	Chang'ble.	Rain in afternoon.
21	55	60	Fair.	
22	60	50	"	
23	45	50	"	
24	45	60	"	
25	55	65	"	
26	60	77	"	Very warm.
27	68	77	"	" "
28	65	60	"	
29	65	65	"	
30	50	63	"	

Mean average per day for the month, 55 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
May	1	55 deg.	70 deg.	Fair.	Rain at night.
	2	60	66	"	
	3	52	60	"	
	4	55	62	"	
	5	50	58	"	
	6	60	70	"	
	7	70	75	"	
	8	67	80	"	
	9	72	75	"	
	10	70	75	"	
	11	70	70	"	
	12	67	78	"	Rain at night.
	13	65	65	"	" "
	14	57	65	"	
	15	60	72	"	Light rain at night.
	16	58	62	"	
	17	59	62	"	Rain at night.
	18	60	65	Cloudy.	Rain all day and night.
	19	70	69	Fair.	
	20	65	74	"	
	21	65	70	"	
	22	65	67	"	Light rain at 4 P. M.
	23	65	67	"	
	24	65	65	Cloudy.	
	25	58	63	Fair.	
	26	60	67	"	
	27	62	67	"	
	28	67	70	"	
	29	65	67	"	
	30	65	70	"	Shower of rain at 5.30 P. M.
	31	60	69	"	

Mean average per day for the month, 65 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
June	1	65 deg.	70 deg.	Fair.	Rain at night.
	2	67	70	"	
	3	65	62	Cloudy.	Light rain.
	4	60	65	"	Rain
	5	58	65	Fair.	
	6	60	65	"	
	7	68	78	"	
	8	70	84	"	
	9	70	81	"	
	10	85	74	Cloudy.	Rain.
	11	65	74	Fair.	
	12	70	78	"	
	13	74	80	"	
	14	76	80	"	Rain at night.
	15	75	70	"	
	16	65	70	"	
	17	65	76	"	
	18	68	72	"	
	19	65	72	"	
	20	67	75	"	
	21	70	78	"	Rain at night.
	22	77	82	"	
	23	76	76	"	
	24	77	80	"	Rain at night.
	25	76	78	Cloudy.	Rain during day.
	26	76	80	"	
	27	77	74	"	Shower of rain during P. M.
	28	75	83	"	
	29	81	79	"	Rain and thunder storm at night.
	30	81	84	"	

Mean average per day for the month, 72 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER.	REMARKS.
	8 A. M.	10 P. M.		
July 1	82 deg.	85 deg.	Fair.	
2	84	89	"	
3	86	82	"	Light thunder storm.
4	79	81	"	
5	80	79	"	Heavy shower at 5:30 P. M.
6	77	80	"	Light " during P. M.
7	75	76	Cloudy.	
8	73	80	Fair.	
9	80	80	"	
10	77	85	"	
11	80	75	"	Heavy rain during P. M.
12	75	80	"	
13	78	82	"	
14	80	84	"	
15	78	83	"	Rain at night.
16	80	80	"	
17	81	78	"	
18	82	88	"	
19	81	80	"	
20	73	80	"	
21	73	80	"	Rain at night.
22	73	80	"	
23	73	78	"	
24	75	85	"	
25	78	87	"	
26	80	89	"	Shower of rain at 2 A. M.
27	80	80	"	
28	80	74	"	
29	77	81	"	
30	80	82	"	
31	75	85	"	Shower of rain at 3½ P. M.

Mean average per day for the month, 79 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER	REMARKS.
	8 A. M.	10 P. M.		
Aug. 1	75 deg.	79 deg.	Rain.	
2	75	75	Cloudy.	
3	75	80	Fair.	
4	77	80	"	
5	75	78	"	Rain during night.
6	73	75	"	
7	73	72	"	
8	72	77	"	
9	75	77	"	
10	73	80	"	
11	77	85	"	
12	79	85	"	
13	77	86	"	
14	80	86	"	
15	80	78	"	Rain at 5 P. M. and 9½ P. M.
16	80	75	Rain.	
17	74	80	Fair.	Rain at 5 P. M.
18	75	81	"	
19	80	78	"	Rain at 6½ P. M.
20	77	82	Rain.	
21	80	78	"	
22	77	84	Fair.	
23	76	80	"	
24	75	80	"	
25	77	82	"	
26	77	85	"	
27	77	84	"	
28	74	77	"	
29	76	75	Rain.	
30	74	67	Fair.	
31	62	69	"	

Mean average per day for the month, 79 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
Sept.	1	62 deg.	71 deg.	Fair.	
	2	67	75	"	
	3	62	70	"	
	4	60	70	"	
	5	62	75	Rain.	
	6	65	77	Fair.	
	7	70	80	"	
	8	80	85	"	
	9	80	78	Rain.	
	10	78	77	Fair.	
	11	75	76	Rain.	
	12	74	75	"	
	13	72	74	Fair.	
	14	70	67	"	
	15	57	60	"	
	16	56	65	"	
	17	60	68	"	
	18	60	68	"	
	19	67	66	Rain.	
	20	67	65	Fair.	
	21	67	70	"	
	22	74	75	"	
	23	78	75	"	
	24	75	76	"	
	25	75	73	Rain.	
	26	70	75	Cloudy.	Rain at night.
	27	75	73	Fair.	
	28	63	64	"	
	29	70	75	"	
	30	70	67	"	

Mean average per day for the month, 70 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
Oct.	1	60 deg.	58 deg.	Fair.	
	2	50	57	"	
	3	57	70	"	
	4	67	70	"	
	5	68	70	"	
	6	70	72	"	
	7	65	68	Rain.	
	8	58	60	Fair.	
	9	60	61	"	
	10	55	60	"	
	11	48	51	"	Frost.
	12	50	55	"	
	13	50	55	Cloudy.	Rain during afternoon.
	14	42	47	Fair.	
	15	44	47	"	
	16	47	62	"	
	17	55	64	"	
	18	55	65	"	
	19	48	58	"	
	20	40	55	"	
	21	45	55	"	
	22	50	66	"	
	23	55	66	Rain.	
	24	60	60	"	
	25	60	66	"	
	26	60	66	Fair.	
	27	55	62	"	
	28	55	58	Cloudy.	
	29	47	55	Fair.	
	30	46	52	"	
	31	48	54	"	

Mean average per day for the month, 57 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.		THERMOMETER.		WEATHER.	REMARKS.
		8 A. M.	10 P. M.		
Nov.	1	40 deg.	57 deg.	Fair.	
	2	52	50	Rain.	
	3	47	49	Fair.	
	4	42	49	"	
	5	40	55	"	
	6	50	62	Cloudy.	
	7	56	57	Fair.	
	8	55	55	"	
	9	45	48	"	
	10	38	44	"	
	11	45	58	Rain.	
	12	50	50	Fair.	
	13	45	50	Rain.	
	14	48	49	Cloudy.	
	15	39	46	Fair.	
	16	32	33	Cloudy.	Snow about 6 P. M.
	17	26	36	Fair.	
	18	32	37	"	
	19	29	42	"	
	20	29	33	"	
	21	26	37	"	
	22	37	40	"	
	23	35	43	"	
	24	35	46	"	
	25	40	45	Cloudy.	Rain during afternoon.
	26	35	41	Fair.	
	27	33	41	"	
	28	32	40	"	
	29	30	19	"	
	30	13	25	"	

Mean average per day for the month, 43 degrees.

## METEOROLOGICAL OBSERVATIONS.

1872.	THERMOMETER.		WEATHER.	REMARKS.
	8 A. M.	10 P. M.		
Dec. 1	24 deg.	40 deg.	Cloudy.	Rain at night.
2	39	55	Fair.	
3	40	45	"	
4	35	35	"	
5	35	45	Rain.	
6	35	44	Fair.	
7	44	40	"	
8	40	45	"	
9	40	29	Snow.	
10	29	30	Fair.	
11	28	30	Snow.	Hail during night.
12	29	26	Fair.	
13	20	30	"	
14	30	40	"	
15	35	45	"	
16	40	50	Rain.	
17	40	32	Cloudy.	
18	29	37	Rain.	
19	30	40	Snow & Rain	
20	35	45	Rain.	
21	29	35	Fair.	Little Snow. Snow eight inches deep.
22	19	23	"	
23	20	25	"	
24	19	18	"	
25	15	15	Cloudy.	
26	20	22	Snow.	
27	20	17	Fair.	
28	12	26	"	
29	19	29	"	
30	25	30	"	
31	35	45	Cloudy.	Rain at night.

Mean average per day for the month, 31 degrees.

## RAINFALL.

Rainfall for the past year, recorded by Col. E. T. D. Myers, General Superintendent of the Richmond, Fredericksburg and Potomac Railroad Company :

1872.		1872.	
	Inches.		Inches..
January.....	1.82	July.....	1.63
February.....	3.28	August.....	4.44
March.....	4.55	September.....	2.42
April.....	2.22	October.....	5.14
May.....	1.77	November.....	2 22
June.....	2.01	December.....	2.76

Included in this estimate was seven inches of snow reduced to water, and counted as rain.

July was the driest month, and October that in which the greatest amount of rain fell.

## GENERAL REMARKS.

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By a comparison of the Mortuary Report for the year 1871, with that of 1872, it appears that during the past year the mortality has increased 262. This increase can be ascribed to several causes. To two of these we call your attention. One being the increase of population of our city—another, in the opinion of the Board, being the injurious influences created by the disturbance of so much of the soil of our streets, for their improvement during the heated term. During the first six months of the year 1871 the mortality was 778, and during the last six months of the same year 774. In that year, the changes made in the streets were carried on mainly in the fall, winter and early spring. Last year an extensive system of improvement was inaugurated, most of which was perfected in the summer time. In the first six months of the year 1872 the mortality was 638; in the last six months of the same year it was 1,076; showing an excess of 438 in the six months ending December 31st, 1872.

The Board, in former communications, called the attention of your body to the propriety of confining the operations of grading the streets mainly to those months in the year in which we can reasonably expect frost to counteract the injurious effects likely to be produced by upturning so much of the soil and sub-soil of the city. In towns of the age of this, it is well known that the sub-soil becomes impregnated with the drainage from sinks and cess-pools, and this soil, exposed to the hot rays of the summer sun, allows many matters to escape which prove detrimental to health. The Board, im-

pressed with the idea of the injury likely to result to the public health, took no steps for the enforcement of your ordinance as to culverts until the cold weather ; and all orders for the connection of premises with the public sewers have been given with the expectation of having the work done in the winter and early spring.

It is a well established fact that where there is much disturbance of the sub-soil of a city, in the summer time, disease is apt to occur—fevers general and of a dangerous type are likely to prevail. In a neighboring city, an extensive system of sewerage was introduced and prosecuted during the heated term, and disease very soon ensued, attributed by the health authorities to the cause alluded to. Should it be the intention of your body to continue an equally extensive system of improvement of streets the following year, as during the last, the Board recommend that operations in this line be confined to the fall, winter and early spring. In our climate but a short time will be lost in the winter by reason of the frosts, and the interruption will be of little consequence. And while citizens, living upon streets which are being improved, suffer temporary inconvenience by the work being done in the winter, that inconvenience is more than compensated by the immunity from disease which follows, and the fact that the streets will be in a better and firmer condition. The Board therefore respectfully urge your body to modify your determination of requiring all such work to be done in the summer and early fall.

#### SHOCKOE CREEK.

The condition of Shockoe Creek should, at an early day, command your attention. Unconfined as it is at present, (except for a short distance,) and tortuous in its course, every rise causes it to overflow a large surface of land, leaving de-

posits on the adjacent grounds, to ferment and render the atmosphere impure and unhealthy. In the summer its current is sluggish, and, loaded as it is, by the contents of several public sewers and the refuse from many slaughter houses emptying into it, its meandering course serves to retain these offensive contents within the city limits for such a length of time as to breed disease.

The Board suggest that the limits of this stream be defined by the City Engineer, and barriers be placed by driving piles, thereby confining it to what may be considered its legitimate channel, thus rendering the current more rapid. Ultimately it will be necessary to arch over Shockoe Creek in that part of the city which is thickly built up.

The Board have observed, with much apprehension, as to the results upon the health of the city bordering on Shockoe Creek, the erection of a dam within the city limits. The preparations for this structure were noticed by the Board, but the object was not understood until the dam was finished. Upon our recommendation, your body took steps to abate a nuisance of a similar character immediately adjoining this property ; one much complained of and believed to have been the cause of much disease. One or two of the city sewers empty into Shockoe Creek above this dam, and their contents must necessarily be retained in the pond in dry weather when the flow of water is limited. We ask that some action may be taken to relieve that portion of the city from the nuisance.

#### GARBAGE.

The removal of what is generally termed garbage is becoming a question of some interest to the city authorities, in consequence of citizens availing themselves of the carts employed in this service, for the removal from their lots of every species of refuse matter, (the list too long to enume-

rate,) many of which are innocuous in themselves, and which should be removed by the owners of property. The term *garbage* is intended to apply to kitchen offal alone, which should be moved to points beyond the city limits, to be sold at once, or measures taken to prevent it from becoming offensive to the neighborhood in which it may be deposited. It will be eagerly sought for by the gardeners in the vicinity of the city, and the sale will go far towards defraying the expense of removal. The coal and wood ashes, free from garbage and substances likely to ferment, can, with propriety, be used in extending the streets of the city. We recommend an ordinance requiring the citizens to keep these substances distinct, and that separate carts be used for the two purposes.

#### PRIVATE ALLEYS.

No action has been taken by your body upon the recommendation of the Board, made last year on this subject. Great inconvenience is now experienced in consequence of a doubt existing in the minds of our citizens whether the responsibility rests with them of cleaning these thoroughfares. It is believed that in nearly every instance the right to these alleys will be cheerfully ceded to the city, with the stipulation that the public authorities will bestow as much care and attention upon their cleanliness as the regular streets now receive. Many of them, by their position, require grading and paving, and if the city is not prepared to assume control of them, power should be lodged with some authority to require it to be done.

We respectfully ask that a force from the chain-gang may be placed under the direction of the Board, for the special purpose of cleansing the alleys. We learn from the officer in charge of this force, that twelve men under charge of one of his assistants can be readily spared.

## BONE MILLS—SOAP FACTORIES—FACTORIES OF ARTIFICIAL GUANOS.

Complaint is often made to this office of the offensive effluvia arising from these several different establishments, and the fears of citizens residing near them are aroused as to the danger to the public health. At times, every one of the above-named factories are sources of decided annoyance to the neighborhoods in which they are located. But while the Board is not satisfied that all of them are deleterious to health, they think and advise that *Bone Mills* and *Factories of Artificial Guanos* in which *decomposing animal matter is used*, may be excluded from the city's limits.

A recent inspection of an establishment, located within the city's limits, in which bone-crushing and the manufacture of artificial guano from substances containing animal matter were conducted, has so impressed the Board with the evils likely to result to the public health and comfort, that we earnestly beg that an ordinance be *at once* prepared to exclude such establishments. No one can form an idea of the offensive nature of the process referred to, except by personal examination, or being subjected to the noxious fumes emitted in the neighborhood. The influence is not confined to its immediate locality, but every breeze conveys the poisonous vapors over a large district of the city. It is difficult to find language to describe the sickening and enervating influence exercised by the effluvia generated in the manufacture of guanos from decomposing animal matter.

## PAPER MILLS.

Recent experience has developed the fact, that great danger is to be apprehended by the manner in which operations in Paper Mills are conducted. Materials which are contami-

nated with Small-Pox matter are received, not only from our own city, but imported from other cities, to be handled and assorted by the operatives, before being subjected to any system of purification. The consequence has been that a number of operatives in these mills have contracted the Small-Pox.

In an adjoining State, this same disease broke out among the operatives of a Paper Mill, attributed to the same cause. This danger could be obviated by requiring the officers of these establishments to subject all the materials to a process of disinfection before being handled by more than one person—he being one who had had the disease. Humanity requires that this should be demanded of those in charge of such manufacturing.

In all the establishments before alluded to, the proprietors should be required to use every precaution to render operations inoffensive, although they may not be strictly prejudicial to health. In connection with this subject we recommend that some restraint should be exercised as to the storage of *green hides* within the limits of the city.

#### PENITENTIARY GRAVEYARD.

In a special communication to your body, attention was called to the fact, that all the convicts who die in the Penitentiary, are buried within the grounds attached to that institution. By special ordinance of your body, no person can be buried within the limits of the city, except in some licensed burying ground. After the extension of the limits of the city, so as to include this territory, your attention was called to the fact, that these grounds were still being used for that purpose. That part of the city, adjacent to the Penitentiary, is now being thickly built up, and some effort should at once be made to discontinue the use of these grounds for such purposes.

## CENSUS OF THE CITY.

The Board are satisfied that the census taken in 1870 was imperfect, and that our city was not credited by the amount of population to which it was entitled. We have arrived at this conclusion from our own observation—the reports of heads of families who affirm that no call was made upon them for information, and by the reports of the Sanitary Inspectors who visit every house in the city frequently during the year. It is useless for the Board to dilate upon the importance to the welfare of a city, that a correct census should be secured; we shall content ourselves by calling your attention to the necessity of establishing the healthfulness of any place to make it attractive, and draw to it population, capital and enterprise. The bills of mortality of all places are examined to ascertain the death-rate per thousand; and that city which can show a fair record as to health, combined with other advantages, will be sure to increase rapidly. We are satisfied a new census would not be attended with the trouble and expense which many suppose. We commend this subject to your early consideration.

In making our annual report of deaths, we have estimated the population of the city to be sixty thousand, a figure which we believe to be below the actual population.

## SMALL-POX HOSPITAL.

The propriety of erecting a suitable Hospital for the accommodations of patients suffering from Small-Pox, could not be presented to your consideration at a more appropriate time. In the emergency of last year, the Committee on Health retained the city property at Clarke's Spring, and made such arrangements as answered the wants of that time. Fortunately, no epidemic of the disease existed, and its use was limited as

to duration of time and number of inmates. We may not be so fortunate again. Small-Pox is now in our city, happily, thus far, confined to a few, but no one can say when there will be a necessity for more accommodation than the limited quarters at that place afford. Besides, the location was accepted and adopted with the full knowledge that it must necessarily be temporary—the ground being needed for a new reservoir.

We therefore, urge that steps be at once taken to secure a suitable site, and orders be given for the erection of a commodious and comfortable hospital. We say comfortable, as we consider it all-important that an hospital devoted to the treatment of this disease should have every comfort—it should be made sufficiently inviting to the sufferers, and the transition from home would not be so much dreaded.

#### SMALL-POX.

Vaccination and re-vaccination are the great preventives of the spread of this disease—as to the first, time and success have established its propriety; recent experience has demonstrated the necessity of the last. In both cases, we recommend that the services of *medical gentlemen* be secured; they supply themselves with reliable virus, and can judge from the appearance of the *pock* in its different changes, whether the operation of vaccination has been successful and will afford protection. In the minds of many unprofessional persons, a sore arm is deemed sufficient—no greater mistake could be made.

Isolation is another important means of stamping out the disease. This can be best secured by transferring patients to the hospital; or failing to do this, confining them and their immediate attendants to one apartment, and as a warning to others, some signal of the existence of the disease in a house,

(such as a white flag,) which, by special ordinance of your body, is now required to be displayed.

Inasmuch as your body does not require the removal of persons suffering from this disease to the hospital, it is very important that this Board be authorized to employ one or more reliable intelligent persons who have had the disease, to visit every house after the recovery or death of a patient, to carry out their orders as to the use of disinfectants. Furthermore, they should be empowered to *appraise* and *remove* all articles of wearing apparel, bedding and furniture which, in the opinion of the Board, would be dangerous to allow to remain on the premises, giving a copy of their appraisal to the head of the family. Upon such appraisal being presented to the President of the Board of Health, that he be directed to give an order on the Auditor of the City for the amount of such appraisal.

The general prevalence of small-pox in this country and Europe in the last few years, has excited so much interest, that we think we will be pardoned for submitting a few statistics to show how peculiarly blessed our community has been. In the year 1871, upon the first intimation of danger of the appearance of this disease, your attention was called to it, and measures suggested by which we hoped to avert it. At our solicitation your body authorized the appointment of six medical gentlemen to vaccinate the citizens. Their reports show that they vaccinated nearly 10,000 persons. In that year only four cases of small-pox appeared in our city, all imported from points where the disease existed. All of these cases recovered, and there was no extension of the disease in the families into which it was introduced. In the year 1872, some few sporadic cases occurred prior to the month of November, when a number were reported to this office. The first sufferers were members of our City Regiment, which had visited Baltimore where small-pox was known to exist,

Your body, immediately upon being notified of any danger to the public health, appointed twelve medical gentlemen as public vaccinators. From their reports, herewith appended, it appears that they vaccinated thirteen thousand and thirty-one persons. It is impossible to form an estimate of the number vaccinated by other practitioners of medicine and by private persons—the number must be very large, as the alarm has been very general.

We believe our city is now very well protected. But the reports of the vaccine physicians show a number of persons who persistently refuse to allow their children to be vaccinated. No argument will induce them to submit to the operation, and the strong arm of the law should compel them. Stringent means should be adopted to require them to accept an expedient which prevents them from becoming *foci* to breed this dreadful scourge. The Board recommend that measures be taken to enforce compulsory vaccination, under such heavy penalties as will ensure their observance. Our sister cities have resorted to these means. In order to keep our city well protected from small-pox, we recommend the appointment of a certain number of physicians as public vaccinators at a fixed salary. In addition to the duties which such an office would necessarily impose, we recommend that they be required, upon instructions from this Board, to visit all cases which have no medical attendant, and which are suspected of being small-pox or varioloid, and report the facts to this Board. Furthermore we suggest, that the health officer be empowered, by special ordinance, to cause the removal to the hospital of all cases, which he may consider likely to endanger the public health.

During the past year, and up to the 1st of March of this year, eighty-two cases of this disease have been reported; of which number six cases can be traced to the fact, that the

patients had been subjected to the influence of the disease outside of the city, which developed itself upon their arrival here; and five cases which can be traced to the handling of rags (which were contaminated) received from some point where the disease existed—leaving only seventy-one cases developed from influences existing here. During the year 1872, only three deaths occurred from this disease—two whites and one colored. From the 1st of January, 1873, to March 1st, there have been seventeen deaths—eleven whites and six colored.

#### SEWER CONNECTIONS.

The Board trust that no alteration will be made in the ordinance on culverts, unless more explicit explanations are added to define the wishes of the Council as to the manner of the connections, and as to what is expected to be conveyed away in the sewers. The reports of the Sanitary Inspectors will show the number of orders issued for connection—the number which have been complied with, and the number in which the work has been directed. It would be unjust to those who cheerfully complied with the requirements of the ordinance to be annoyed by nuisances being allowed on adjoining premises, when they had removed every cause of complaint from their own lots. No valid reason can be assigned for the change of the ordinance now, that the public are appreciating the beneficial results of its enforcement. The Board have relieved every one recommended by committees of your body.

In this connection, your attention is called to the condition of the district of the city lying west of Brook Avenue and north of Broad street, as being destitute of all culvert facilities. A recent inspection of that part of the city shows the great need of such improvements. The cellars as well as the lots, have been inundated, and the citizens can find no

relief. The Board recommend that culverts be constructed along Brook Avenue, Smith and Gilmer streets, with lateral branches along Leigh, Clay and Marshall streets; and an extension of the culvert on Monroe street from Broad to Marshall street. By these means a very large and thickly populated district will be drained, and the health and comfort of its inhabitants greatly promoted.

#### GENERAL HOSPITAL.

The Board deem it proper to call your attention to the want of hospital accommodation for a class of patients now entirely overlooked, but demanding from the charities of a city of the size of this some consideration. We allude to those cases of accidents and acute disease occurring among our citizens and transient visitors, who have not the comforts of a permanent home, or the means to secure medical attention, medicines and nursing. Our city has established an Alms-house which compares most favorably with those in cities of much larger growth and wealth. In size and all its appointments it is a credit to our city. This institution is intended more especially for chronic diseases, the infirm and destitute. Your predecessors made a temporary arrangement with the authorities of the Medical College to supply this deficiency in the city's charities, but this has been suspended, and now this unfortunate class is mainly dependant upon the benevolence of the medical profession, the apothecaries, and a few persons with whom they may be thrown. In many cities the liberality of certain charitable persons have endowed such institutions, and relieved the corporate authorities partially from the necessity of providing such accommodations. Such has not been the case with us; and impoverished as our community is, cannot be expected. Hence it devolves upon your body to supply this pressing want.

The applicants for this charity will be found, in a great part, among those who cannot be considered paupers—generally, they will be recognized as active, industrious laborers, who, while in the enjoyment of health, are capable of supporting themselves, but when prostrated by disease or accident, need assistance. The operatives in our factories of different kinds, draymen and laborers, and the many others employed in vocations which are necessarily attended with risk to life and limb, are the ones whose claims for assistance we now urge.

#### SIDE-WALK PAVEMENTS.

In former communications we urged upon your predecessors the importance of these improvements, as calculated to lessen the number of acute diseases in winter and spring. Since then an extensive district has been added to the city, and but a small part of it furnished with facilities of access to and from the residences of its inhabitants. Every citizen is interested in these improvements ; first, the heads of families in such districts are compelled in the winter and spring to wade through the mud to their several places of business, and enter upon their duties, with shoes saturated with moisture ; their children repair to school, and are compelled to occupy their allotted seats, and pursue their studies while suffering from the cold and wet ; the mothers, in many cases, have to procure the daily supplies of the family from market, and return home chilled by the dampness and unfitted for the other duties of the day. This want is not confined to the new part of the city—much of the old district is still deprived of these facilities. The residents of the densely populated districts need these improvements, for the benefit of exercise in the less thickly built up part of the city.

Many years ago, the Council very wisely adopted the plan of extending these pavements rapidly. It was the experience

of physicians of that day, that the acute diseases of winter and spring were sensibly diminished. These advantages are more urgently demanded than improvements to the roadways. The City Engineer can easily decide upon the grade of the streets, and any outlay on the side walks will only be in advance of future improvement of the whole street.

We suggest the rapid and general introduction of the four foot side pavement, with granite flagging at all the crossing of streets.

The importance of a Board of Health for a city of the size of this, is apparent and recognized by every one. The services rendered have been appreciated by the public—the duties and responsibilities involved have greatly increased, and under its present organization, the President is the executive officer, and nearly all his time is required for the faithful discharge of such obligations. The small compensation, in connection with the attention bestowed, has excited general surprise, and while interest in the welfare of the city has been a sufficient motive for cheerful devotion to duty, neglect of other claims demands some effort for proper remuneration ; and we now respectfully ask your just consideration of the subject.

Respectfully submitted,

J. G. CABELL, M. D.,  
*Pres't Board of Health.*

FOURTH  
ANNUAL REPORT  
OF THE  
SCHOOL BOARD,  
AND  
*The Superintendent*  
OF  
PUBLIC SCHOOLS,  
OF THE  
*CITY OF RICHMOND, VA.*

FOR THE YEAR 1871--'72.



# ANNUAL REPORT.

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OFFICE OF THE SCHOOL BOARD,

OF THE CITY OF RICHMOND,

RICHMOND, Jan. 1st, 1873.

*To the City Council :*

GENTLEMEN—The School Board beg to present their annual report, for the year ending with the 31st of June, 1872. Unhappily the close of the school session occurs at a period several months removed from the close of the fiscal year, when the other city reports are made up ; and the Board is therefore constrained to make its wants known to your honorable body through other means than the annual report. The statistical and other information furnished by the accompanying documents, afford a complete and satisfactory account of the progress of this important part of the public work of the city, and we are gratified to be able to add that the results have so commended the system to the judgment of the people, that each year witnesses a steady increase in the number of applicants for admission to the schools.

Fortunately we are now, (March 1st, 1873,) on a footing as to buildings and apparatus, which renders unnecessary any further increase in that direction, save for the completion and equipment of the High and Normal School, for which an appropriation has already been made.

While joining the Superintendent in the merited praise he bestows on the admirable body of teachers and principals by whom he has been assisted, the Board takes pleasure in bearing witness to the eminent qualifications which the Superintendent himself has brought to the discharge of his duties, and to the successful manner in which he has performed them. These duties are, under all circumstances, well calculated to tax the patience, skill and capacity of him who undertakes them, but their novelty and a certain public distrust here, greatly enhance the difficulty in our section.

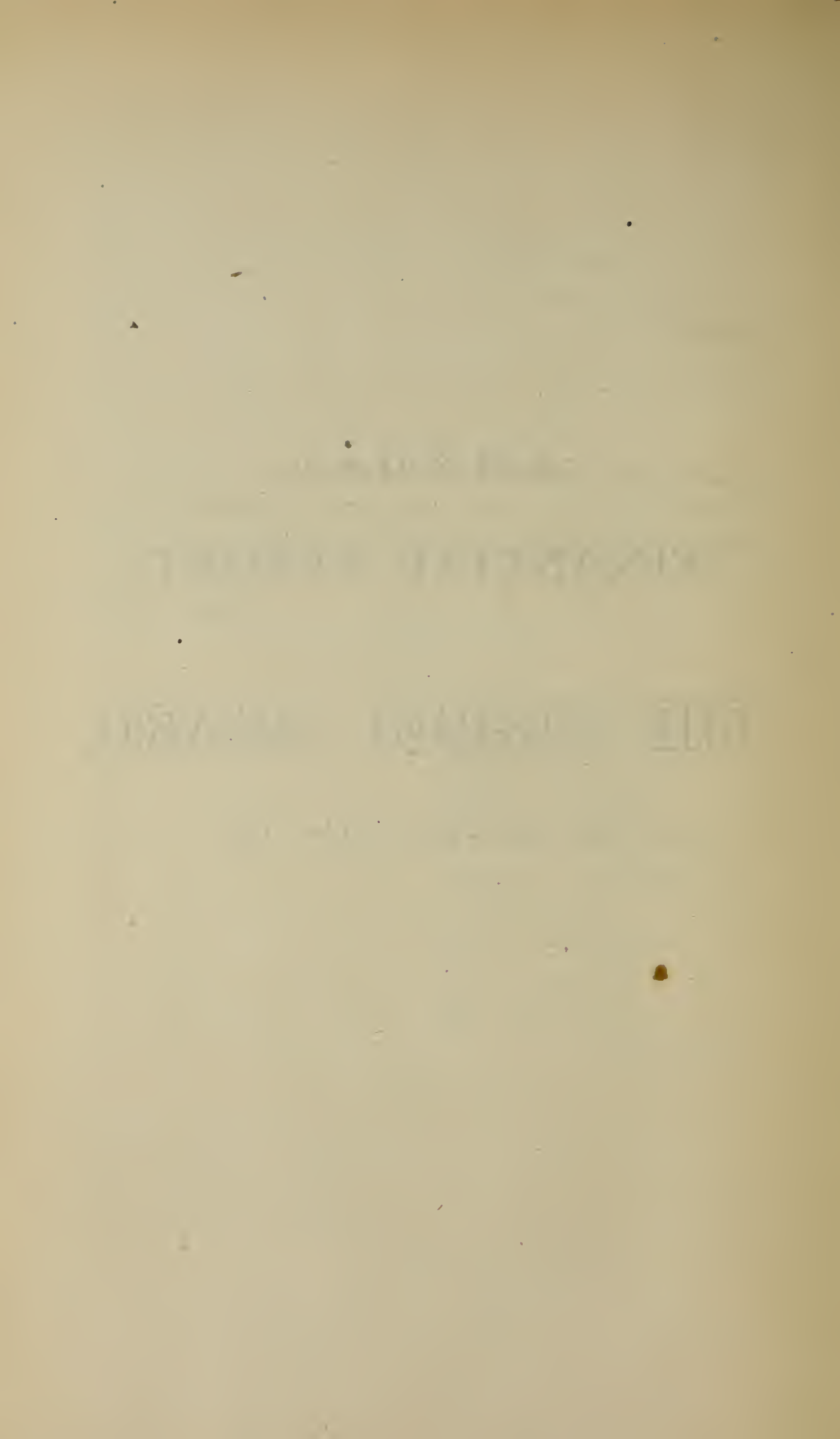
The Board cannot conclude without expressing their profound gratefulness to the Council for the enlightened liberality with which it has been pleased to regard the Public Schools, and the cordial aid it has never failed to render to all efforts in their behalf.

Respectfully submitted,

A. M. KEILEY,  
 ALFRED MOSES,  
 JOHN HAGAN, JR.,  
 CHAS. P. RADY,  
 R. E. RICHARDSON,  
 JOHN C. SHIELDS,  
 R. M. MANLY,  
 WM. C. KNIGHT,  
 M. L. STRAUS,  
 WM. ENGLISH,

*School Board.*

ANNUAL  
FINANCIAL REPORT  
OF  
THE SCHOOL BOARD,  
For the Year 1871--'72.



# FINANCIAL REPORT.

OFFICE OF THE SCHOOL BOARD,  
1201 *Clay Street*, Jan. 1st, 1873.

*To the President and Members of the  
School Board, City of Richmond:*

GENTLEMEN—I have the honor herewith to submit my annual financial report for the fiscal year ending 1st August, 1872:

DISBURSEMENTS for support of Public Schools for Scholastic Year 1871—'72:

1872.

Aug. 1.—Teachers and Principals pay .....	\$41,220 09
Janitors and Messenger .....	2,063 33
Rent of school houses .....	3,399 68
Repairs, supplies and fitting schools .....	1,374 72
Teachers' text books and books for indigent children .....	478 57
Stationery, printing and advertising .....	978 36
Incidental expenses .....	415 00
Insurance on buildings and furniture .....	493 25
Secretary's salary .....	944 33
Fuel .....	2,035 26
	<hr/>
	\$53,402 59

DISBURSEMENTS for account of purchase of Real Estate, Furniture, School Apparatus and for Construction:

1872.

Aug. 1.—Purchase of lot for Madison School, in rear of Cary Street front .....	\$	821 33
Purchase of lot for Leigh School .....		465 00
Construction account for Baker School .....		9,214 21

Aug. 1.—Construction account for Central School.....	248 56
do. do. for Leigh School.....	15,438 46
do. do. for Bellevue School.....	18,823 89
do. do. for Valley School.....	1,940 92
do. do. for Bethel School.....	2,452 98
do. do. for Brook Avenue School.....	132 55
do. do. for Madison School.....	3,840 00
Payments for School furniture and apparatus.....	8,184 63
	<hr/>
	\$61,562 53

DISBURSED by the School Board from the 1st Aug. 1871,  
to 1st Aug. 1872:

For the support of Schools.....	\$ 53,402 59
For construction and purchase of real estate and School furniture.....	61,562 53
	<hr/>
Total disbursements.....	\$114,965 12

DISBURSED by warrants, viz:

On the City Treasurer.....	\$32,584 79
On the City Auditor.....	34,709 66
On the Chairman Finance Committee.....	40,626 79
On the Planters' National Bank.....	5,718 89
On the Chairman Building and Furniture Committee..	1,324 99
	<hr/>
	\$114,965 12

DISBURSED by School Board, as per warrants drawn on  
Treasurer of City of Richmond, from August 1st, 1871, to  
August 1st, 1872, inclusive, to the order of viz:

No. 1, Aaron Patterson, Janitor.....	\$ 25 00
2, J. B. Ege, (Petersburg,) Printing.....	26 00
3, E. D. Kelly, School Furniture.....	40 00
4, W. L. Peasley, Repairs.....	23 58
5, Wm. Willis, Jr., Rent.....	25 00
6, B. Bates, Stationery.....	3 82
7, Randolph & English, Stationery.....	6 34
8, John Adams, Repairs.....	2 50
9, J. H. Crenshaw, Rent.....	36 00
10, W. Willis, Jr., Rent.....	25 00
11, B. Bates, Stationery.....	2 63
12, Baughman Brothers & Co., Stationery.....	42 00

No. 13, Dudley & Moody, Repairs.....	5 00
14, Purcell, Ladd & Co., Supplies.....	5 10
15, S. Zetelle, Incidental.....	48 15
16, R. L. Williams, Supplies,.....	1 00
17, H. W. Tyler, Rent.....	37 50
18, E. A. Smith, Rent.....	75 00
19, G. & A. Bargamin, Repairs.....	25 10
20, J. G. Andrews, Rent.....	125 00
21, Richmond Whig, Advertising.....	52 00
22, John Boucher, Rent.....	37 50
23, A. Patterson, Janitor.....	25 00
24, J. J. Binford and Price, Rent.....	75 00
25, Enquirer Office, Advertising.....	17 25
26, B. W. Gillis, Directory.....	2 50
27, German Advertiser, Advertising.....	12 00
28, Virginia State Gazette, Advertising.....	22 50
29, Felix Matthews' estate, Rent.....	37 50
30, S. G. Flournoy, Rent.....	25 00
31, Mrs. M. B. Sweeny, Rent.....	60 00
32, Wirt Roberts, Fuel.....	1,385 60
33, Richmond Dispatch, Advertising.....	50 75
34, Teachers' Pay for October, &c.....	4,455 38
35, Janitors' Pay for October, &c.....	25 00
36, Evening State Journal, Advertising.....	14 50
37, Ivison, Blakeman, Taylor & Co., Books.....	105 40
38, Russel & Erwin Manufacturing Co., School Furniture.....	47 50
39, B. Bates, Stationery.....	7 00
40, H. P. Keane, Rent.....	68 75
41, W. H. Wade, Printing.....	56 50
42, Vincent Bargamin, Repairs.....	33 00
43, Ellyson & Taylor, Books.....	40 63
44, J. V. L. McCreery, Supplies.....	27 14
45, B. Bates, Books.....	131 70
46, J. M. Stevens, Agent, Supplies.....	36 00
47, John B. Suit, Supplies.....	2 00
48, Wesley Chase, School Furniture.....	85 00
49, C. Pilout, Repairs.....	1 50
50, R. E. Warren, Rent.....	10 00
51, Trustees B. Church, Rent.....	5 00
52, Kirkpatrick & Co., School Furniture.....	21 75
53, Moody & Dudley, Construction.....	132 50
54, John Tyler, Rent.....	100 00
55, John Morrison, Incidental.....	12 00
56, A. R. Brooks, Incidental.....	4 50

No. 57, B. C. Galloway, Repairs.....	15 85
58, H. W. Tyler, Rent.....	37 50
59, Baughman Brothers & Co., Stationery.....	12 87
60, E. D. Eacho, Ground Rent.....	20 00
61, W. S. Donnan & Sons, Supplies.....	2 50
62, H. P. Taylor, Rent.....	20 00
63, Randolph & English, Books and Stationery.....	66 76
64, Alfred S. Lee, Repairs.....	1 85
65, Alfred Moses, Secretary, Salary.....	527 77
66, Teachers' Pay Roll for November.....	4,588 85
67, Nolting & Brother, Supplies.....	8 80
68, John Adams, Repairs.....	13 64
69, Wirt Roberts, Fuel.....	153 38
70, J. A. Dudley, Agent, Repairs.....	35 42
71, Trustees M. E. Church, Rent.....	24 00
72, Randolph & English, Stationery.....	32 00
73, B. Bates, Books.....	12 93
74, Moses Norrel, Repairs.....	3 00
75, J. V. L. McCreery, Supplies.....	5 86
76, E. A. Smith, Rent.....	75 00
77, A. Patterson, Janitor.....	25 00
78, E. A. Ambold, School Furniture.....	32 00
79, W. Pfeifer, Repairs.....	34 48
80, H. P. Taylor, Rent.....	20 00
81, R. Wendenburg, School Furniture.....	3 15
82, J. H. Peay, Jr., Fuel.....	3 25
83, Taylor & Richardson, School Furniture.....	54 50
84, Teachers' Pay Roll for December.....	4,535 16
85, R. Gathright, Leigh School.....	475 00
86, J. A. Temple, Construction.....	116 94
87, Wm. Davis & Son, Leigh School.....	175 94
88, J. & G. Gibson, Leigh School.....	400 00
89, W. B. Cook, Construction.....	168 89
90, Shanks & Barrett, Leigh and Baker Schools, .....	1,200 00
91, Mrs. M. B. Sweeny, Rent.....	60 00
92, Teachers' Pay Roll, balance for December.....	25 35
93, J. & G. Gibson, Leigh School.....	250 00
94, Janitors' Pay Roll, December.....	206 75
95, A. S. Lee, for Carneal, Bellevue School.....	539 87
96, J. & G. Gibson, Leigh School.....	500 00
97, Edmond Griffin, Leigh School.....	16 87
98, U. Neal, Bellevue School.....	1,591 18
99, Old Dominion S. S. Company, School Furniture.....	9 55
100, Janitor's Pay for December.....	25 00

No. 101, J. & G. Gibson, Leigh School.....	521 90
102, Jules Morein, Coustruction.....	100 00
103, R. B. Gathright, Leigh School.....	51 10
104, Hudgins & Neal, Bellevue School.....	267 02
105, Alfred Moses, Secretary, Salary.....	166 66
106, Edmond Griffin, Construction.....	145 98
107, Teachers' Pay Roll for February.....	4,000 00
109, Teachers' Poy Roll for April.....	2,600 00
110, T. L. D. Walford, Tre., School Furniture.....	800 00
Total.....	<u>\$32,584 79</u>

DISBURSED by the School Board, as per warrants drawn on Auditor of the City of Richmond, from August 1st, 1871, to August 1st, 1872, inclusive, to the order of viz :

No. 41, Trustees Methodist Church, Rent.....	\$ 18 50
42, A. R. Brooks, Incidental.....	22 00
43, S. G. Flournoy, Rent.....	25 00
44, A. Patterson, Janitor.....	25 00
45, John Tyler, Rent.....	100 00
46, P. I. Jackson, Incidental.....	35 50
47, R. Ed. Association, Rent.....	266 66
48, Rev. Geo. Woodbridge, Rent.....	27 50
49, Kellogg & Gibson, Supplies.....	1 50
50, Baughman & Son, Stationery.....	12 25
51, S. G. Flournoy, Rent.....	25 00
52, E. A. Smith, Rent.....	25 00
53, Trustees E. Church, Rent.....	30 00
54, Vincent Bargamin, Repairs.....	8 00
55, J. A. Dudley, Repairs.....	84 00
56, Binford & Price, Rent.....	100 00
57, Felix Matthews' estate, Rent.....	39 00
58, J. H. Goodman, School Furniture.....	51 25
59, J. J. Binford, Repairs.....	12 00
60, Cox & Miller, Supplies.....	6 70
61, W. G. Dandridge, do.....	18 38
62, R. W. Powers, do.....	3 25
63, R. L. Williams, do.....	3 75
64, B. Bates, Books.....	5 14
65, S. H. Jones, Rent.....	30 00
66, U. Neal, Construction Bellevue School.....	590 54
67, F. Krœber, School Furniture.....	204 32
68, A. J. Vaughan, Repairs.....	31 08

No.	69, Purcell, Ladd & Co., Supplies.....	14 32
	70, Mrs. S. D. Saunders, Rent.....	15 00
	71, Wm. Turpin, Construction (Baker School).....	12 00
	72, A. G. Babcock, Incidental.....	17 35
	73, Trustees Masonic Hall, Rent.....	50 00
	74, Thomas Hewlett, Rent.....	31 00
	75, J. G. Andrews, Rent.....	125 00
	76, J. B. Crenshaw, Rent.....	140 70
	77, Trustees Springfield Hall, Rent.....	30 00
	78, T. L. D. Walford, Bibles.....	6 40
	79, Baughman Bros. & Co., Stationery.....	14 37
	80, John B. Suit, School Furniture.....	3 50
	81, Anderson & King, Fuel.....	57 33
	82, D. O'Donnell, Repairs.....	2 00
	83, J. H. Heckman, Repairs.....	10 00
	84, J. B. Crenshaw, Rent.....	40 00
	85, E. Currant, School Furniture.....	6 75
	86, A. T. Stewart & Co., Window Shades.....	469 56
	87, Turner, Seymore & Judd, Window Shades.....	190 55
	88, J. E. Phillips, Construction Bellevue School.....	594 93
	89, U. Neal, Construction Bellevue School.....	63 00
	90, Burroughs & Co., Construction Bethel School.....	40 00
	91, R. Maynard & Co., Construction sundry Schools.....	389 75
	92, Shanks & Barrett, Construction Baker School.....	685 37
	93, Shanks & Barrett, Construction Leigh School.....	853 04
	94, Janitors' Pay Roll for January.....	219 00
	95, Teachers' Pay Roll for January.....	4,496 18
	96, Mrs. M. B. Sweeny, Rent.....	20 00
	97, Wm. S. Donnan & Sons, Supplies.....	12 25
	98, Johnson & Estes, Repairs.....	3 17
	99, J. J. Binford, Repairs.....	13 90
	100, J. & G. Gibson, School Furniture.....	312 60
	101, J. H. Goodman, Sundry Repairs.....	96 30
	102, Iveson, Blakeman & Co., Books.....	10 20
	103, W. L. Peasley, Repairs.....	2 50
	104, B. Bates, Books.....	24 78
	105, Richmond Whig, Advertising.....	2 25
	107, Eldridge & Bro., Text Books.....	31 78
	108, F. E. Forsyth, Rent.....	50 00
	109, O. D. Steamship Co., School Furniture.....	16 18
	110, Va. State Gazette, Printing.....	12 00
	111, John Tyler, Rent.....	100 00
	112, H. P. Keane, Rent.....	83 75
	113, S. H. Jones, Rent.....	10 00

No. 114,	Levy Bros., School Furniture.....	6 90
115,	H. W. Tyler, Rent.....	37 50
116,	E. Pilout, Repairs.....	4 35
118,	J. V. L. McCreery, Supplies.....	6 10
119,	H. P. Keane, Supplies.....	13 00
120,	Teachers' Pay Roll, to Balance, January.....	39 00
121,	Ar. Iron and Stove Manf. Company, School Furniture...	1,622 55
122,	Russel & Erwin Manf. Company, School Furniture.....	24 25
123,	J. A. Temple, Construction Account.....	7 00
124,	Janitors' Pay Roll for February.....	210 00
125,	Teachers' Pay to Balance February Roll.....	611 66
126,	Rogers & Miller, Construction Account.....	50 00
127,	Purcell, Ladd & Co., Supplies.....	16 78
128,	W. H. Wade, Printing.....	28 00
129,	J. E. Phillips, Construction Account.....	184 85
130,	J. H. Goodman, Repairs.....	19 77
131,	Wm. Turpin, Baker School.....	49 00
132,	Richmond Whig, Printing.....	24 00
133,	Baughman, Stokes & Co., Supplies.....	4 20
134,	Davis & Briggs, Bethel School.....	57 54
135,	V. Bargamin, Repairs.....	30 00
136,	Wm. Pfeiffer, Bellevue School.....	25 65
137,	U. Neil, Bellevue School.....	15 50
138,	E. Currant, School Furniture.....	10 00
139,	R. P. Richardson, School Furniture.....	4 00
140,	Teachers' Pay Roll for March.....	4,605 00
141,	James Jeffries, Construction Account.....	103 00
142,	Janitors' Pay Roll for March.....	212 50
143,	Harper Bros., Books.....	18 90
144,	Ellyson & Taylor, Books.....	12 50
145,	J. J. Binford, Repairs.....	3 00
146,	D. Appleton & Co., Maps.....	18 00
147,	B. Bates, Books.....	28 59
148,	J. G. Andrews, Rent.....	125 00
149,	Trustees Springfield Hall, Rent.....	45 00
150,	S. H. Hawes, Fuel.....	28 50
151,	G. D. Portieux, Fuel.....	6 00
152,	Stark & Ryland, Books.....	9 86
153,	Rd. Ed. Association, Rent.....	266 66
154,	R. M. Manly, Fuel.....	27 00
155,	J. Schumann, Repairs.....	17 75
156,	Baughman Brothers & Co., Stationery.....	8 30
157,	J. Hall & Co., Construction account.....	43 00
158,	J. Sleicher, Repairs.....	1 35

No.	159, Alfred Moses, Incidental.....	24 55
	160, D. O'Donnell, Baker School.....	2 50
	161, J. W. Randolph & English, Stationery.....	11 93
	162, G. F. Watson, School Furniture.....	32 00
	163, A. Ordway & Co., Repairs.....	10 00
	164, Thomas Hewlett, Rent.....	30 00
	165, J. W. Schermerhorn, Books.....	2 00
	166, Teachers' Pay Roll, to balance March.....	26 33
	167, Wilson & West, School Furniture.....	214 52
	168, E. Thall, Baker School.....	20 13
	169, J. H. Goodman, Baker School.....	39 00
	170, Georgia Home Insurance Company, Insurance.....	18 75
	171, T. L. D. Walford, School Furniture.....	46 43
	172, Teachers' Pay Roll, April.....	1,994 52
	173, Janitors' Pay Roll, April.....	218 50
	174, Lybrock & Seibert, Madison School.....	65 00
	175, Alfred Moses, three months' Salary.....	250 00
	176, H. W. Tyler, Rent.....	37 50
	177, J. M. Stevens, Agent, Supplies.....	25 53
	178, J. Marsh, School Furniture.....	2 50
	179, J. H. Goodman, School Furniture.....	12 50
	180, E. D. Eacho, Ground Rent.....	20 00
	181, J. J. Binford, Repairs.....	2 50
	182, S. G. Flournoy, Rent.....	25 00
	183, P. Green, Repairs.....	2 50
	184, C. H. Ditson & Co., Books.....	35 75
	185, Alfred S. Lee, Bellevue School.....	5 10
	186, Ned Wright, Repairs.....	13 00
	187, Levy Brothers, Supplies.....	1 60
	188, A. R. Brooks, Incidental.....	7 00
	189, Wirt Roberts, Fuel.....	171 00
	190, Cordle & Clinely, Repairs.....	1 00
	191, Baughman Brothers & Co., Stationery.....	5 33
	192, B. C. Galloway, Repairs.....	3 50
	193, J. V. L. McCreery, Supplies.....	10 43
	194, M. Pollock, School Furniture.....	19 00
	195, Janitors' Pay Roll for May.....	223 00
	196, Teachers' Pay Roll for May.....	3,420 00
	197, Teachers' Pay Roll for May.....	1,195 00
	198, Davis & Briggs, Bethel School.....	16 45
	199, U. Neal, Bellevue School.....	12 00
	200, R., A. Iron and Stove Company, School Furniture.....	7 70
	201, Watkins & Brother, Fuel.....	200 00
	202, Wm. Davis & Son, Leigh School.....	46 00

No.	203, Wm. Turpin, Baker School.....	1 50
	204, J. J. Young, for Diplomas.....	129 70
	205, R. Maynard & Brother, Bethel Schoal.....	87 63
	206, John Adams, Construction.....	75 56
	207, T. L. D. Walford, School Furniture.....	20 00
	208, B. Bates, Stationery.....	9 02
	209, Sam'l Lewis, Silver Medals for Schools.....	205 60
	210, Alfred Moses, Incidental.....	93 76
	211, J. M. Stevens, Agent, Supplies.....	6 30
	212, E. A. Ambold, School Furniture.....	5 00
	213, Julius Schumann, Repairs.....	25 00
	214, Virginia Home Insurance Company, Insurance.....	32 25
	215, Shanks & Barrett, Leigh School.....	33 50
	216, Purcell, Ladd & Co., Supplies.....	4 62
	217, Kellogg & Gibson, School Furniture.....	1 87
	218, A. R. Brooks, Incidental.....	10 50
	219, Teachers' Pay Roll for June.....	46 10
	220, Janitors' Pay Roll for June.....	3 38
	221, Trustees Springfield Hall, Rent.....	45 00
	222, Thomas Hewlett, Rent.....	20 00
	223, J. H. Goodman, Repairs.....	3 50
	224, Rd. Ed. Association, Rent.....	266 66
	225, Richmond Whig, Printing.....	73 80
	226, W. L. Peasley, Repairs.....	16 28
	227, A. R. Brooks, Incidental.....	43 00
	228, Alfred Moses, Incidental.....	21 79
	229, A. J. Andrews, Rent.....	125 00
	230, R. M. Tuck, Fuel.....	3 00
	231, S. G. Flournoy, Rent.....	25 00
	232, J. W. Randolph & English, Charts.....	7 50
	Total.....	<hr/> \$34,709 66

DISBURSED by School Board, as per warrants drawn on Chairman Finance Committee, from August 1st, 1871, to August 1st, 1872, inclusive, to the order of viz :

No.	10, U. Neal, Bellevue School.....	\$800 00
	11, Hudgins & Neal, Bellevue School.....	1,372 67
	12, J. A. Temple, Construction.....	75 00
	13, Wm. Davis & Son, Leigh School.....	1,000 00
	14, Gideon Ragland, Baker School.....	1,314 55
	15, J. & G. Gibson, Leigh School.....	1,000 00
	16, Hudgins & Neal, Bellevue School.....	1,200 00

No. 17, John A. Temple, Construction.....	36 45
18, Moody & Dudley, Valley School.....	175 00
19, J. H. Goodman, School Furniture.....	75 00
20, Wm. Davis & Son, Leigh School.....	593 81
21, U. Neal, Bellevue School.....	1,000 00
22, J. & G. Gibson, Leigh School.....	800 00
23, Davis & Briggs, Bethel School.....	500 00
24, Hudgins & Neal, Bellevue School.....	563 62
25, R. H. Higgins, Bellevue School.....	109 20
26-27, Boyd & Turpin, Baker School.....	1,800 00
28, Moody & Dudley, Valley School.....	354 50
29, A. Ordway & Co., Construction.....	690 80
30, Shanks & Barrett, Leigh School.....	500 00
31, U. Neal, Bellevue School.....	800 00
32, Moody & Dudley, Valley School.....	100 00
33, John Adams, Baker School.....	400 00
34, J. & G. Gibson, Leigh School.....	1,200 00
35, J. H. Goodman, School Furniture.....	190 00
36, Boyd & Turpin, Baker School.....	300 00
37, Peter Morris, Valley School.....	118 03
38, U. Neal, Bellevue School.....	800 00
39, A. Ordway & Co., Construction.....	502 75
40, J. H. Goodman, School Furniture.....	75 00
41, Dudley & Moody, Valley School.....	478 50
42, Old Dominion S. S. Co., School Furniture.....	6 70
43, John Adams, Baker School.....	54 12
44, J. & G. Gibson, Leigh School.....	1,000 00
45, P. H. Russell, Leigh School.....	400 00
46, Geo. C. Cornick, Baker School.....	16 80
47, Davis & Briggs, Bethel School.....	699 00
48, A. S. Lee, Construction.....	18 90
49, W. L. Carneal, Bellevue School.....	500 00
50, U. Neal, Bellevue School.....	600 00
51, G. & A. Bargamin, Construction.....	14 00
53, Moody & Dudley, Valley School.....	333 72
54, Powhatan Steamboat Co., Bellevue School.....	13 50
55, Dimmock Bros., Construction.....	500 00
56, J. H. Goodman, School Furniture.....	425 00
57, A. J. Vaughan, for Moody & Dudley, Valley School.....	289 25
58, P. H. Russell, Leigh School.....	400 00
59, John Landres, Leigh School.....	18 00
61, Snyder & Irby, School Furniture.....	800 00
62, Davis & Briggs, Bethel School.....	500 00
63, U. Neal, Bellevue School.....	900 00

No. 64, Hudgins & Neal, Bellevue School.....	908 83
65, R. Gathwright, Leigh School.....	300 00
66, D. O'Neil, Construction.....	100 00
67, John Adams, Baker School.....	500 00
68, J. H. Goodman, School Furniture.....	25 00
69, U. Neal, Bellevue School.....	200 00
70, Davis & Briggs, Valley School.....	400 00
71, J. & G. Gibson, Leigh School.....	100 00
72, H. McElwin, Construction.....	155 81
73, E. Griffin, Construction.....	21 65
74, A. S. Lee, Construction.....	125 10
75, J. Landres, Construction.....	22 00
76, W. B. Cook, Construction.....	28 44
77, Peter Morris, Construction.....	13 00
78, J. Landres, Construction.....	12 00
79, W. Pfeiffer, Bellevue School.....	400 00
80, J. & G. Gibson, Leigh School.....	1,607 71
81, P. H. Russell, Leigh School.....	480 00
82, John Adams, Baker School.....	102 24
83, J. A. Temple, Construction.....	50 00
84, D. O'Neil, Construction.....	231 50
85, Boyd & Turpin, Baker School.....	1,000 00
86, Davis & Briggs, Bethel School.....	58 52
87, Boyd & Turpin, Baker School.....	729 96
88, R. Gathright, Leigh School.....	300 00
89, J. H. Goodman, School Furniture.....	73 56
90, J. Hall & Co., Construction.....	22 80
91, Snyder & Irby, School Furniture.....	1,000 00
92, J. L. Jackson & Bro., Construction.....	812 48
93, Boyd & Turpin, Baker School.....	269 16
94, U. Neal, Bellevue, School.....	1,000 00
95, A. J. Vaughan, Baker School.....	740 40
96, Grubbs & Williams, Real Estate, Leigh School.....	465 00
97, W. Pfeiffer, Bellevue School.....	846 45
98, J. E. Phillips, Bellevue School.....	1,200 00
Total.....	<u>\$40,626 79</u>

DISBURSED by the School Board, as per drafts drawn on the Planters' National Bank, from August 1st, 1871, to August 1st, 1872, inclusive, to the order of viz :

No. 1, E. & G. R. Meneely, School Furniture.....	\$455 00
2, Shanks & Barrett, School Furniture.....	289 48
3, A. D. Williams, Real Estate, Madison School.....	821 33
4, Snyder & Irby, School Furniture.....	378 08
5, Wm. Davis & Son, Madison School.....	75 00
6, Wm. Davis & Son, Madison School.....	1,000 00
7, Jarvis & Glinn, Madison School.....	400 00
8, Wm. B. Cook, Madison School.....	200 00
9, Wm. B. Cook, Madison School.....	150 00
10, Wm. Davis & Son, Madison School.....	800 00
11, Wallen & Wray, Madison School.....	250 00
12, Lybrock & Seibert, Madison School.....	100 00
13, Jarvis & Glinn, Madison School.....	800 00
	<hr/>
	\$5,718 89

RECEIPTS AND DISBURSEMENTS by Alfred Moses, Secretary, for and on account of Janitors' pay from 1st August, 1871 to 1st August, 1872:

#### DISBURSED.

1871.

August, Messenger's monthly pay.....	\$ 25 00
September, do. do. ....	25 00
October, do. do. ....	25 00
November, Janitors' Pay Roll.....	211 75
December, do. do. ....	214 75

1872.

January, Janitors' Pay Roll.....	231 33
February, do. do. ....	220 25
March, do. do. ....	214 50
April, do. do. ....	228 25
May, do. do. ....	225 75
June, do. do. ....	219 75
July, do. do. ....	222 00

## RECEIVED.

No. 44, Warrant on City Auditor.....	\$25 00	
1, do. Treasurer.....	25 00	
23, do. do. ....	25 00	
35, do. do. ....	25 00	
77, do. do. ....	25 00	
94, do. do. ....	206 75	
100, do. do. ....	25 00	
94, do. Auditor .....	219 00	
124, do. do. ....	210 00	
142, do. do. ....	212 50	
173, do. do. ....	218 50	
195, do. do. ....	223 00	
220, do. do. ....	338 00	
To Balance Forward to Account.....	285 58	
	<hr/>	
	\$2,063 33	\$2,063 33

RECEIPTS AND DISBURSEMENTS by Alfred Moses, Secretary, for and on account of Teachers' and Principals' pay, from 1st August, 1871, to 1st August, 1872.

## DISBURSED.

1871.

November, Teachers' and Principals' Pay Roll.....	\$ 4,455 38
December, do. ....	4,588 85

1872.

January, Teachers' and Principals' Pay Roll.....	4,565 51
February, do. ....	4,540 18
March, do. ....	4,615 32
April, do. ....	4,635 33
May, do. ....	4,594 52
June, do. ....	4,615 00
July, do. ....	4,610 00

## RECEIVED.

No. 34, Warrant on City Treasurer.....	\$4,455 38
66, do. do. ....	4,588 85
84, do. do. ....	4,535 16
92, do. do. ....	25 35
95, Warrant on City Auditor.....	4,496 18
120, do. do. ....	39 00

No, 125, Warrant on City Auditor.....	611 66	
107, do. Treasurer.....	4,000 00	
140, do. Auditor.....	4,605 00	
166, do. do. ....	26 33	
172, do. do. ....	1,994 50	
109, do. Treasurer.....	2,600 00	
196, do. Auditor.....	3,420 00	
197, do. do. ....	1,195 00	
219, do. do. ....	4,610 00	
To Balance Forward to Account.....	17 66	
		\$41,220 09 \$41,220 09

RECEIPTS AND DISBURSEMENTS on account of School Board,  
by Alfred Moses, Secretary, from August 1st, 1871, to Au-  
gust 1st, 1872.

#### RECEIPTS.

1871.

August 1, Per balance in hands of A. Moses, Treasurer.....	\$364 35
do. do. A. Moses, Chairman Building Com.....	894 85
Received for Sale of Table.....	6 00
do. Six Thermometers.....	2 25
do. Six Brooms.....	1 38
do. Three Call Bells.....	2 00
do. One Clock.....	3 25
do. One Clock.....	5 00
do. One Clock.....	3 00
do. Old Slate.....	3 00
do. Old Wardrobe.....	2 00
do. Six Months Rent, Valley School.....	24 00

#### DISBURSEMENTS.

1871.

September, For repairs and supplies, as per vouchers....	\$12 25
J. H. Binford, Supt., per order of Board, traveling expenses.....	75 00
Paid sundry guards for Bellevue, Leigh and Baker Schools while erecting, as per vouchers	42 00
October, Old Dominion Insurance Company, insurance on buildings.....	112 50
Virginia State Insurance Company, insurance on buildings.....	112 50

October, Virginia Home Insurance Company, insurance on buildings.....	112 50	
Paid sundry guards for guarding Bellevue, Leigh and Baker Schools, as per vouchers.....	99 00	
Old Dominion Insurance Company, insurance on buildings.....	37 50	
November, Virginia Home Insurance Company, insurance on buildings.....	66 25	
For repairs and supplies, as per vouchers.....	35 35	
October, do. do. do. ....	38 60	
November, Paid sundry guards for guarding Bellevue, Leigh and Baker Schools, as per vouchers.....	54 00	
December, Paid sundry guards for guarding Bellevue, Leigh and Baker Schools, as per vouchers.....	86 00	
For repairs and supplies to sundries, as per vouchers.....	67 30	
1872.		
January, For repairs and supplies to sundries, as per vouchers.....	44 15	
February, To J. M. Thompson, for school furniture.....	49 40	
For repairs and supplies to sundries, as per vouchers.....	36 00	
March, For repairs and supplies to sundries, as per vouchers.....	6 00	
April, Boyd & Turpin, Baker School.....	21 00	
For repairs and supplies, as per vouchers.....	6 40	
May, June and July, do. ....	13 90	
July, To balance due on Janitors' pay roll to date.....	285 58	
To balance due on Teachers' pay roll to date.....	17 66	
By balance.....		119 76
	<u>\$1,430 84</u>	<u>\$1,430 84</u>
1872.		
July 1, Balance due Alfred Moses, Secretary.....		\$119 76

## COST OF TUITION.

Estimated cost per scholar for Teachers' and Principals' pay, 1871-72 :

Total enrolment.....	4,663	Per scholar....	\$ 8 84
Average enrolment.....	3,691	" ....	11 17
Average daily attendance.....	3,254	" ....	12 63

Estimated cost for tuition per scholar, on total expenditures for support of schools for scholastic year 1871-72 :

Total enrolment.....	4,663	Per scholar....	\$11 45
Average enrolment.....	3,691	" ....	14 46
Average daily attendance.....	3,254	" ....	16 41

Comparative estimated cost per scholar, for Teachers' and Principals' pay, and estimated entire cost per scholar on total expenditures for support of schools for scholastic years 1870-71, 1871-72 :

*Cost for Teachers and Principals, per scholar.*

	1870-71.		1871-72.	
Total enrolment.....	3,875	\$ 8 02	4,663	\$ 8 84
Average enrolment.....	3,156	9 83	3,691	11 17
Average daily attendance.....	2,752	11 23	3,254	12 63

*Cost on total expenditures, per scholar.*

	1870-71.		1871-72.	
Total enrolment.....	3,875	\$10 88	4,663	\$11 45
Average Enrolment.....	3,156	13 35	3,691	14 46
Average daily attendance.....	2,752	15 31	3,254	16 41

RESOURCES of School Board on the 1st day of August, 1871, and receipts of moneys during the fiscal year :

1871.

August 1, Due School Board by City Treasurer for state apportionments, to date.....	\$14,774 70
Due School Board by Chairman Finance Committee, to balance.....	38,719 33
Due by same for interest received on deposits in Planters National Bank.....	2,180 20

## Deposited in Planters National Bank—

Educational bonds, sold at par.....	\$9,000 00
Received of Geo. Peabody's School Trustees.....	1,500 00
Interest received on sundry bonds.....	1,580 44
	<u>\$12,080 44</u>

1872.

Aug. 1. For State apportionments received in the fiscal year, to date.....	\$18,251 10
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1871.

Aug. 1, Balance due by A. Moses, Treasurer.....	\$364 35
Balance due by A. Moses, Chairman Building Com- mittee.....	894 85
	<u>\$1,259 20</u>
City appropriation for the support of Schools for 1871-72.....	32,500 00
Less for Drafts overdrawn on previous years' ac- count.....	761 84
	<u>\$31,738 66</u>
	<u>\$119,003 63</u>
Expenditures by the School Board for all purposes during fiscal year, ending August 1, 1872.....	\$114,343 77
August 1st, 1872, Net balance on hand.....	<u>\$4,659 86</u>

## FISCAL YEAR 1872-73.

Resources to meet expenditures for the fiscal year ending  
August 1st, 1873:

1872.

August 1, Net balance on hand.....	\$4,659 86
February, Appropriation by City Council for support of schools...	33,000 00
Estimated amount to be received from State apportion- ments.....	23,500 00
\$3,000 city of Richmond bonds on hand, market value..	2,400 00
\$2,000 Va. State stock on hand, market value.....	1,000 00
Expected annual donation from Peabody School Trustees.	1,500 00
	<u>\$66,059 81</u>

## ESTIMATED EXPENDITURES FOR THE FISCAL YEAR 1872-73.

Estimated cost for the support of Public Schools for the  
scholastic year 1872-73:

For teachers' pay.....	\$42,400 00
For principals' pay.....	10,350 00
For janitors.....	2,750 00

For fuel .....	2,750 00
For rent of school houses .....	2,500 00
For office expenses .....	1,250 00
For repairs and supplies .....	1,250 00
For incidental expenses .....	500 00
For printing .....	400 00
For advertising .....	300 00
For stationery .....	500 00
For books, maps and charts .....	850 00
For insurance account .....	700 00
	<u>\$66,500 00</u>

**ESTIMATED EXPENDITURES for buildings, betterments to buildings, school furniture and apparatus :**

Amount required to finish Madison School, now erecting .....	\$11,000 00
For furnaces in Leigh, Baker and Bellevue Schools .....	2,000 00
For betterments to buildings .....	2,000 00
For school furniture and apparatus .....	3,000 00
	<u>\$18,000 00</u>

**TOTAL ESTIMATED EXPENDITURES.**

For support of Schools for 1872-73 .....	\$66,500 00	
For buildings and furniture, &c .....	18,000 00	
	<u>          </u>	\$84,500 00
Estimated receipts .....		66,059 86
		<u>          </u>
Deficit .....		\$18,440 14
Appropriation promised by City Council, to complete \$43,000 00 asked for .....	\$10,000 00	
Amount estimated to be received for capitation tax ...	4,000 00	
	<u>          </u>	\$14,000 00
		<u>          </u>
Total deficit .....		\$4,440 14

**ENTIRE EXPENDITURES made by School Board, for the purchase of real estate, building school houses, school furniture and apparatus, from August 1st, 1870, to August 1st, 1872 :**

**REAL ESTATE.**

For purchase of Central School .....	\$14,000 00	
do. Leigh School lot .....	2,805 00	
do. Baker School lot .....	3,000 00	
do. Bellevue School lot .....	3,750 00	
do. Madison School lot .....	821 33	
	<u>          </u>	\$24,376 33

## IMPROVEMENTS AND BUILDINGS.

Central School.....	\$ 7,596 38	
Valley School.....	1,940 92	
Bethel School.....	2,452 98	
Brook Avenue School.....	132 55	
Baker School.....	16,155 50	
Leigh School.....	22,472 41	
Bellevue School.....	24,541 37	
Madison School.....	3,840 00	
	<hr/>	\$79,132 11
For Furniture and school apparatus.....		10,835 33
Total.....		<hr/> \$114,343 77

## VALUE OF REAL ESTATE AND SCHOOL PROPERTY

In possession of the School Board for school purposes, belonging to the city of Richmond on the 1st day of August, 1872:

Central School.....	\$27,596 38
Bellevue School.....	28,291 37
Baker School.....	19,155 50
Brook Avenue School.....	4,132 55
Valley School.....	11,940 92
Bethel School.....	10,452 98
Leigh School.....	25,277 41
Madison School.....	6,661 33
Furniture and school apparatus.....	10,835 33
	<hr/>
	<hr/> \$144,343 77

# BY-LAWS.

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The following additions to the By-Laws were adopted by the School Board during the year ending January, 1873.

## ARTICLE VI.

SEC. 16. He shall, at each regular meeting of the School Board, submit a statement in writing of all disbursements made by him during the preceeding month, not including disbursements previously passed and ordered to be paid by the Board.

## ARTICLE IX.

SEC. 6. It shall be the duty of the Committee to have recorded in a book provided for that purpose, a full and accurate description, with location, of all the real estate owned by the city for school purposes, under the control of this Board, and in like manner a complete inventory of all the school furniture and other property for the use of public schools ; and that semi-annual reports be made in the months of June and October, by inventory to be submitted to the School Board at the next regular meeting thereafter.

SEC. 7. It shall be the duty of the Committee to keep fully insured all the buildings owned by the city for school purposes, and under control of this Board ; and as far as may be practicable, keep insured all the furniture and other property in the service of the public schools, so that all may in like manner be protected against loss by fire.

In concluding this report, I beg leave to add that the details herein submitted will be found correct, when compared with the books of the Board and vouchers filed in this office. I earnestly request the Committee on Accounts to make an examination of the books, vouchers and papers, and at their earliest convenience report on same to the Board.

My thanks are tendered to the President and members of the School Board for many courtesies during the past year.

Appended will be found a supplemental financial report from August 1st, 1872, to March 1st, 1873.

Respectfully submitted,

ALFRED MOSES,

*Sec'y School Board.*



ANNUAL REPORT

OF THE

COMMITTEE

ON

School Houses and Furniture.

# REPORT.

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OFFICE OF SCHOOL BOARD,  
1201 *Clay Street*,  
March 1st, 1873.

*To the President and Members of School Board,  
City of Richmond :*

GENTLEMEN—Your Committee on School Houses and Furniture, have the honor herewith to submit their annual report :

Your Committee are pleased to inform the Board that the school houses and all other school property belonging to the city of Richmond are in excellent condition and preservation, needing few, if any unimportant repairs.

On several occasions during the last year, your committee had the honor to report that betterments were absolutely essential to many of the school buildings, for the promotion of health, comfort and discipline of the children attending those schools. The suggested improvements referred to, apply more especially to the want of an assembly hall at the Central School, also protection to shelter the children in bad weather at this School ; also the necessity for the same protection at the Leigh, Bellevue, Baker and Bethel Schools.

## MADISON SCHOOL.

This building was occupied on the 1st November, 1873. It is now complete in structure and furniture, and its capacity is sufficient to supply the present demand for schools in that part of the city.

## NICHOLSON SCHOOL.

This property, purchased by the Board last August, was improved under their instructions, finished and occupied by the School October 1st. It is admirably adapted to accommodate about two hundred scholars, and ample to meet all demands for schools in its vicinity.

## VALLEY SCHOOL.

An additional school-room to this building was completed in time for the commencement of the session—there are seven school-rooms in this building.

## BETHEL SCHOOL.

The demand for schools in this district induced your Committee to enclose the gallery with a sliding partition, thereby securing an additional school room. The need of more school rooms in this building is apparent at this time, and no doubt will increase at the next school session.

## BROOK AVENUE SCHOOL.

Your Committee report that this building does not supply the demand for schools existing on the north side of Clay Ward. Originally constructed for a church, it was converted into four school-rooms. The lot is too small and accommodations very scanty—so much so, that only male scholars can be admitted; the structure is of wood and cannot remain in good repair many years. If the Board were to sell this property at its value, it would pay in part for a school building sufficiently large to meet the wants of the citizens of the west ends of Clay and Monroe Wards.

## 12TH AND LEIGH STREET SCHOOL.

This building, formerly the Merrill School, was erected on leased ground in 1865, at a rent of forty dollars per annum, by private contributors in this city and the North, for the free education of colored children. Trustees were appointed to carry out this purpose—under the control of the School Board it will ever be used for a colored school. Your Committee suggest that the Board endeavor to get the trusteeship transferred to themselves. The building is fast decaying, and in a short time it will be unfit for a school house. If it belonged to the city, the property would be kept in good repair and do service for many years.

## NAVY HILL SCHOOL.

This group of buildings, belonging to the Richmond Educational Association, was offered for sale to the School Board on very reasonable terms, (say about \$5,300.) Your Committee frequently recommended its purchase, and are now of the opinion the Board ought to buy the property. The rent paid for three years' past, \$800 per annum, is very excessive—near sixteen per cent. on its value. If the property belonged to the Board and some alterations made at a reasonable cost, four additional schools could be accommodated, making fourteen school-rooms in the group—this would be ample, with the Baker School, to meet all demands of colored scholars in the western end of the city for many years to come.

## NEW HIGH SCHOOL BUILDING.

The title deeds to the lots purchased for the new High School building were examined, found perfect, duly recorded and the purchase money paid. The contractors, Messrs. G. & W. Gibson, agree to deliver the building entire and com-

plete on or before 25th August next—the forfeiture being one hundred dollars per day.

The work on the building has already been commenced and will, without doubt, be completed within the time specified.

#### NEW SCHOOL BUILDING.

The attention of the Board has been frequently called to the demand for more school-rooms for white children in Marshall Ward. If the demand continues to increase, the building of another school house, with a capacity to accommodate at least six school-rooms, will be found to be absolutely necessary in a very short time.

#### SHADE TREES.

The importance of planting a sufficient number of shade trees in each of the school lots, cannot be too highly estimated. The Central School lots are well provided with shade trees—none of the other school lots have any. The cost will be inconsiderable compared with the great advantage to be derived in planting as many as are necessary with the least possible delay, in order that the school lots may, at a future time, be well furnished with so important a matter, adding greatly to the comfort and health of the scholars.

#### FURNACES.

Portable heating furnaces have have been put in the Madison School—from the beginning they were found to operate satisfactorily. All parts of the building are supplied with sufficient and comfortable heat ; also healthy ventilation has been secured. The furnaces at the Leigh School, after a year's experimental trial, will possibly answer the purpose, supplemented with the heat of stoves in two rooms.

The contractors who put in the furnaces at Bellevue and Baker Schools, are arranging to make further experiments to

heat these buildings. Your Committee hope for rood results.

Experience has shown that the proper heating arrangements in public buildings have, in most cases, been accompanied with many almost insurmountable difficulties. Your Committee have not been exempt in this particular in regard to heating the new school buildings. It has been and is now a source of considerable annoyance and trouble to the schools.

Your Committee adopted every precaution to avoid the trouble. The contractors were held bound, on a guarantee, to furnish satisfactory heating of the buildings. Every facility required by them, in their efforts to effect the object, has been furnished by the Board, and it is due to the contractors, to say their determination to accomplish the purpose has been untiring—they have responded promptly and worked diligently to remedy every defect in the furnaces, whenever the same was brought to their notice by your Committee.

#### RENT ROLL.

The rent roll of the School Board was largely increased last year, in consequence of the delay in the construction of the new school houses. For the present year the rent roll is as follows :

Navy Hill School.....	\$ 800 00
High School.....	500 00
Eleventh Street Synagogue.....	250 00
Clay Street Meeting House.....	225 00
Ground Rent, Twelfth and Leigh School.....	40 00
Masonic Hall.....	150 00
Springfield Hall.....	150 00
	<hr/>
	\$2,115 00

Number of seats in Public Schools on 1st March, 1873—  
buildings belonging to the city :

Central School.....	525
Bellevue School.....	556

Bethel School.....	275	
Nicholson School.....	150	
Leigh School.....	600	
Madison School.....	435	
Brook Avenue School.....	194	
Baker School.....	618	
Valley School.....	354	
	<hr/>	\$3,707

#### RENTED BUILDINGS.

Masonic Hall.....	84	
Springfield Hall.....	100	
Navy Hill School.....	562	
Clay Street Meeting House.....	90	
Eleventh Street Synagogue.....	89	
Twelfth and Leigh Street School.....	179	
High School.....	98	
Belle Isle.....	30	
	<hr/>	1,232
Total number of Seats.....		\$4,939
Number of Seats for White Scholars.....	3,126	
Number of Seats for Colored Scholars.....	1,813	
	<hr/>	\$4,939

#### COST OF SCHOOL PROPERTY.

Estimated cost of real estate, buildings and other School property belonging to the City of Richmond, and under the the control of the School Board for School purposes, March, 1873 :

Value of lands.....	\$ 27,055 00
Value of buildings and improvements.....	125,544 65
Value of School Furniture and other property.....	14,951 02
Total.....	<hr/> \$167,548 67
To amount expended by School Board.....	\$132,248 67
To amount due by School Board for construction.....	5,300 00
To estimated value of property transferred by City to School Board for school purposes.....	30,000 00
	<hr/> \$167,548 67

#### CONCLUSION.

Although all the improvements and additional accommodations mentioned in the foregoing are necessary and proper,

your Committee defer, in view of the financial condition of the Board, recommending anything at this time.

If the Council of the City of Richmond would continue the liberal policy towards the public school system, which has heretofore guided them, by placing another appropriation at the control of your Board, it would suffice to complete all the improvements detailed herein. Our school accommodations, for the population of the city, (although not costly,) will then compare favorably with other cities whose public school system has had many years the start of ours.

Your Committee are of the opinion that if the City Council grant an appropriation sufficient for the purposes herein indicated, it will meet with the approval of the tax payers of the city, and the thanks of a grateful population.

Respectfully submitted,

ALFRED MOSES,

*Chairm'n Com. on School Houses and Furniture.*

ANNUAL REPORT

OF THE

Superintendent of Public Schools,

OF THE

*City of Richmond, Va.,*

*For the Year ending June 30, 1872.*



# ANNUAL REPORT.

OFFICE SUPERINTENDENT PUBLIC SCHOOLS,

*Richmond, Va., July 1, 1872.*

*To the President and Members*

*of the School Board of the City of Richmond :*

GENTLEMEN—In compliance with the provisions of the 13th Section of the Ordinance providing for the establishment of Public Free Schools in the city of Richmond, I have the honor to submit the following report of the operations of the Public Schools for the scholastic year, ending June 30th, 1872 :

## NUMBER AND ATTENDANCE OF SCHOLARS.

### WHITE SCHOOLS.

MONTHS.	Enrolment.	Average Attendance.	Per centage of attendance	Av'e enrolm't to each tea'r	Av'e attend'ce to each tea'r
October.....	2217	1974	89	44	39
November.....	2185	1996	91	43	39
December.....	2110	1817	86	41	36
January.....	2369	2039	86	47	40
February.....	2357	2049	87	46	40
March.....	2336	2041	87	45	40
April.....	2336	2115	91	45	42
May.....	2202	1972	90	43	39
June.....	2035	1828	90	40	36

## COLORED SCHOOLS.

MONTHS.	Enrolment.	Average Attendance.	Per cent- age of at- tendance	Av'e en- rolm't to each tea'r	Av'e at- tend'ce to each tea'r
October.....	1464	1267	86	49	43
November.....	1450	1264	87	48	42
December.....	1387	1204	86	46	40
January.....	1512	1347	89	49	44
February.....	1574	1371	87	49	43
March.....	1541	1295	84	48	40
April.....	1488	1304	88	46	41
May.....	1391	1249	90	43	39
June.....	1263	1155	91	39	35

## TOTAL ENROLMENT.

White Schools.....	2,751
Colored Schools.....	1,912
	<u>4,663</u>

## AVERAGE ENROLMENT.

White Schools.....	2,239
Colored Schools.....	1,452
Total.....	<u>3,691</u>

## AVERAGE DAILY ATTENDANCE.

White Schools.....	1,981
Colored Schools.....	1,273
Total.....	<u>3,254</u>

The Average Enrolment for the session of 1870-71 was 3,156.

The Average Daily Attendance for the session of 1870-71 was 2,752.

By reference to the above statement it will be seen that the increase for the session of 1871-72 in average enrolment, was 535; in average daily attendance, 502. Especial attention

is called to the very gratifying fact that the increase in the average daily attendance is *almost identical* with the increase in the average enrolment.

#### NUMBER OF SCHOOLS.

White Schools .....	52
Colored Schools .....	32
Total .....	<u>84</u>

#### NUMBER OF TEACHERS.

White Teachers and Principals .....	79
Colored Teachers .....	8
German Teachers .....	<u>2</u>
Total .....	89

#### NUMBER AND GRADE OF SCHOOLS.

Primary Schools .....	57
Grammar Schools .....	25
Advanced Grammar Schools .....	1
Not Graded Schools .....	<u>1</u>
Total .....	84

Three of the Principals had no separate schools, but taught classes in the other schools in these buildings.

# LOCATIONS AND GRADES OF SCHOOLS,

*With List of Teachers.*

## WHITE SCHOOLS.

CHERRY STREET SCHOOL.

*(Cherry Street, near Hollywood.)*

Capacity, 191 Seats.

LUCILLE S. COSBY, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
1	Cosby, Lucille S.....	Grammar.	Boys & Girls.
2	Hicks, Alice E.....	Primary.	Girls.
3	Bohannon, E. P.....	"	Boys.
4	Robins, L. R.....	"	Boys & Girls

Mrs. E. D. Hundley was the Principal of this school for the months of October, November and December, but was compelled to resign the position on account of delicate health.

The buildings occupied by these schools are too remote and not adapted to our wants. It is confidently hoped that the Board will erect a school building more eligibly located and with larger capacity. The demand for schools is increasing in this locality, and justice to the citizens residing in this portion of the city, calls for prompt action by the Board.

## BROOK AVENUE SCHOOL.

*(Corner Brook Avenue and Clay Street.)*

Capacity, 194 Seats.

C. D. MONTAGUE, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
5	Montague, C. D.....	Grammar.	Boys.
6	Hockaday, L. E.....	"	"
7	Whiting, Julia E.....	Primary.	"
8	Jones, Martha L. W.....	"	"

This is a two-story wooden building, with a very small lot attached. The proximity of this building to the Leigh School and the increasing demand for enlarged accommodations for the scholars residing in the extreme western portion of the city, seem to indicate the necessity, at no distant day, for selling this property and erecting a larger building, to be located farther west. Ample play-ground is one of the essentials for a successful school.

## LEIGH SCHOOL.

*(Corner 1st and Leigh Streets.)*

Capacity, 632 Seats.

REV. W. B. M'GILVRAY, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
9	Savage, M. E. M.....	Primary.	Boys & Girls.
10	Sutton, Virginia T.....	Primary and Gram.	Girls.
11	Hulce, Lucy P.....	Grammar.	do.
12	* Apperson, R. A.....	do.	do.
13	Keiley, Norah M.....	Primary.	Boys & Girls.
14	Hicks, Lucy M.....	do.	Boys.
15	Fulton, Mary A.....	Grammar.	Boys & Girls.
16	Walters, Mary M.....	do.	do.
17	* Curtis, Mary B.....	Primary.	do.
18	Morris, S. R.....	do.	Girls.
19	Garnett, Ella M.....	Grammar.	Boys.
20	Walker, Fanny W.....	Primary.	do.
21	Taylor, M. Pauline.....	do.	Boys & Girls.

\* The schools taught by Mrs. Apperson and Miss Morris, are located in the Friends' Meeting House, but are considered a part of this group.

This is one of the new buildings erected by the Board, and was not ready for occupation until January 1st. During the months of October, November and December, these schools were taught in rented rooms, and were necessarily scattered over a large area. When they were transferred to the building, it was not possible, without serious injury to the progress of the pupils, to make as perfect gradation and classification as we desired. For the next session we hope to have more thorough gradation, and consequently more satisfactory results.

CENTRAL SCHOOL.  
 (Corner 12th and Clay Streets.)  
 Capacity, 520 Seats.  
 S. T. PENDLETON, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
23	Mitchell, Hester A.*.....	Ad. Grammar.	Boys & Girls.
24	Read, Julia P.....	Grammar.	do.
25	Pearce, L. B.....	do.	do.
26	Hutcheson, S. M.....	do.	do.
27	Pecor, Alexine.....	do.	do.
28	Moore, Rosa.....	Primary.	do.
29	Wiglesworth, J. H.....	do.	do.
30	Marsh, E. M.....	do.	do.
31	Shell, M. D.....	do.	do.
32	Shell, E. V.....	do.	do.
33	Waddy, V.....	do.	do.

\* The Advanced Grammar was taught by Miss E. H. New, for six months, but in consequence of failing health, she was compelled to surrender her school.

The building was occupied on October 1st, consequently the grading and classifying of the pupils were more nearly perfected than in any other of the large groups.

A large hall for assembling the scholars would add greatly to the efficiency of this group.

For the next session it is proposed to remove the Advanced Grammar grade to the High School.

## BETHEL SCHOOL.

*(20th Street, between Main and Cary.)*

Capacity, 275 Seats.

W. F. FOX, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
35	Fox, W. F.....	Grammar.	Boys & Girls.
36	O'Neil, Kate.....	Primary.	do.
37	Woodward, E. M.....	do.	do.
38	Lambert, S.....	do.	do.
39	Ramos, S. E.....	do.	do.
40	* Bott, E. T.....	do.	do.

\* This school is located on Nicholson street, Rocketts, but is considered a part of this group.

The attendance at this school, for the first half session, was very small, and it was feared that we had overestimated the demand for schools in that portion of the city. But, under the judicious management of the Principal and Teachers, a very large addition of scholars was made in the last half session. The improvement in discipline and studious habits of the pupils in this school was very marked.

## BELLEVUE SCHOOL.

*(Corner 22d and Broad Streets.)*

Capacity, 610 Seats.

J. H. PEAY, JR., *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
34	Ezekiel, Martha.....	Primary.	Boys & Girls
41	Tompkins, M. J.....	do.	do.
43	Fergus, Maria.....	Grammar.	Boys.
44	Woodward, M. V.....	Primary.	Boys & Girls
45	Martin, Annie.....	Grammar.	do.
46	Dolan, Lizzie F.....	Primary.	do.
47	Stanwood, E. G.....	Grammar.	do.
48	Sharpe, Josie M.....	do.	do.
49	Rogers, H. W.....	Primary.	do.
50	Folkes, L. A.....	do.	do.
51	Hughes, M. C.....	Grammar.	do.
52	Fellows, A. A.....	Primary.	do.

This is one of the new buildings erected by the Board, and was not ready for occupation before January 1st. For the first three months of the session, these schools were scattered in various parts of the city, and were located in rented buildings. When the schools were consolidated, we endeavored to make as perfect a grading and classification of the pupils as was possible under the circumstances, but the loss of the three months could not be entirely overcome, and the general efficiency of the schools was more or less impaired for the rest of the session.

**DETACHED SCHOOL.**

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**BELLE ISLE.****Capacity, 50.**

No. of School.	TEACHERS NAME.	Grade.	Sex.
42	Walker, Mary A.....	Not graded.	Boys & Girls.

## COLORED SCHOOLS.

### BAKER SCHOOL.

(*Cor. Baker and St. Paul Streets.*)

Capacity, 618 Seats.

T. P. CRUMP, *Principal.*

No. of School.	TEACHERS NAMES.	Grade.	Sex.
1	Brown, Ellen F.....	Grammar.	Boys & Girls.
2	Harris, Helen.....	do.	do.
3	Payne, Pattie A.....	Primary.	do.
4	Stith, Laura B.....	do.	do.
5	Dixon, L.....	do.	do.
6	M'William, M.....	do.	do.
7	Gwathmey, M. A.....	do.	do.
8	Farrer, E. G. S.....	do.	do.
31	Barber, M. H.....	do.	do.

This building was not occupied until December 1st. The scattered condition of the schools prevented anything like a complete grading or classification before that time. When the building was occupied, the very large addition of scholars compelled the opening of two additional schools, and a very general remodeling of the classes. Every effort was made to make up for lost time, but, as in the Bellevue and Leigh Schools, the results were necessarily less satisfactory than they would have been, had we been able to occupy the building on October 1st.

## NAVY HILL SCHOOL.

(Cor. 6th and Duval Streets.)

M. ELIZABETH KNOWLES, *Principal*.

Capacity, 441 Seats.

No. of School.	TEACHERS NAMES.	Grade.	Sex.
9	Knowles, M. E.....	Grammar.	Boys & Girls.
10	Dixon, E. V.....	Primary.	do.
11	Stewart, O. M.....	do.	do.
12	Troy, F. E.....	do.	do.
13	Bowser, J. H.....	do.	do.
14	Gilmore, Kate.....	do.	do.
15	Woolfolk, P. H.....	do.	do.
16	Woolfolk, Maggie.....	do.	do.
17	Rogers, F. E.....	do.	do.

With the exception of the principal, this group of schools is taught by colored teachers. We were enabled to organize and grade this school at the beginning of the session, and consequently obtained more satisfactory results than we could have done, had the schools been scattered and the classification and gradation been delayed for two or three months. *Ten* schools were organized on October 1st, but in consequence of the resignation of one of the teachers, on November 1st, the scholars belonging to her school were distributed among the schools here and at Baker. If the Board would purchase this property and make necessary alterations in one of the buildings, we could have three additional schools in this group.

## VALLEY SCHOOL.

*(Corner 14th and Marshall Streets.)*

Capacity, 297 Seats.

S. E. HUGHES, *Principal.*

No. of School.	TEACHERS' NAMES.	Grade,	Sex,
22	Hughes, S. E.....	Grammar,	Boys & Girls,
23	Chappell, M. H.....	Primary,	"
24	Harwood, S. J.....	"	"
25	Birchett, S. E.....	"	"
26	Chappell, C. M.....	"	"
27	Moon, A. E.....	"	"

This is the Lancasterian School, remodeled and refitted. A much larger number of scholars applied for admission into the primary grades of this group than could be accommodated. I recommend that several school-rooms be added to this building, by extending the wing and removing the partitions in the basement.

## DETACHED SCHOOLS.

No. of School.	Teachers Names.	Cap'ty.	Grade.	Sex.	Location.
18	Harris, H. L. S...	30	Grammar.	Boys & Girls.	12th & Leigh Sts.
19	Bass, H. A.....	48	Primary.	"	" "
20	Colin, M.....	48	"	"	" "
21	Fay, G.....	50	"	"	" "
28	Snyder, E. M.....	50	"	"	Springfield Hall.
29	Anderson, M. E...	42	"	"	New Street.
30	Tuck, R. M.....	46	"	"	Springfield Hall.
32	Bingham, M. B...	50	"	"	Wesley Chapel.

## GERMAN TEACHERS.

Rev. M. J. MICHELbacher.

Rev. Jno. BLENNER.

## EXAMINATIONS.

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### INTERMEDIATE EXAMINATION.

On February 20th an examination was held in each school. This examination was not for promotion, but to test the accuracy of the instruction imparted by the teachers, and to ascertain the proficiency of the scholars.

Printed regulations and questions were prepared for each grade in order to secure uniformity.

The examination was oral in the 3d, 4th, 5th and 6th Primary grades. The answers were required to be written in the 1st and 2d Primary, and in the Advanced, 1st, 2d, 3d and 4th Grammar grades.

The results were generally satisfactory, and the effect upon both teachers and scholars was decidedly beneficial.

Below I give the tabulated results :

### WHITE SCHOOLS.

Advanced Grammar—1 School.....	78	Average per cent.	
First Grammar—1 School.....	58	"	"
Second Grammar—3 Schools.....	60	"	"
Third Grammar—5 Schools.....	65	"	"
Fourth Grammar—11 Schools.....	64	"	"
First Primary—8 Schools.....	63	"	"
Second Primary—4 Schools.....	69	"	"
Third Primary—8 Schools.....	77	"	"
Fourth Primary—9 Schools.....	79	"	"
Fifth Primary—5 Schools.....	79	"	"
Sixth Primary—8 Schools.....	81	"	"

Total Average of White Schools, 70 per cent.

## COLORED SCHOOLS.

Third Grammar—2 Schools.....	76	Average per cent.
Fourth Grammar—4 Schools.....	58	“ “
First Primary—5 Schools.....	55	“ “
Second Primary—3 Schools.....	55	“ “
Third Primary—3 Schools.....	55	“ “
Fourth Primary—6 Schools.....	75	“ “
Fifth Primary—4 Schools.....	77	“ “
Sixth Primary—4 Schools.....	69	“ “

Total Average of Colored Schools, 64 per cent.

Per centage of various groups of schools :

## WHITE SCHOOLS.

Cherry Street—4 Schools.....	68
Brook Avenue—4 Schools.....	66
Leigh—13 Schools.....	73
Central—11 Schools.....	77
Bethel—5 Schools.....	67
Bellevue—12 Schools.....	71

## COLORED SCHOOLS.

Baker—9 Schools.....	70
Valley—6 Schools.....	66
Navy Hill—9 Schools.....	56

## FINAL EXAMINATION.

Official examinations were held for promotion, from June 12th to 23d.

Oral examinations were held in the 6th, 5th, 4th and 3d Primary grades on 12th, 13th, 14th and 17th of June.

Written examinations in the 2d and 1st primary, and in the 4th, 3d, 2d, 1st and Advanced Grammar grades on the 17th of June, and continued from day to day until completed.

As far as was practicable, the papers of scholars offered for promotion, were examined by the teacher of the grade for which the scholar was offered.

The following are the results of the examination ;

## WHITE.

Advanced Grammar—1 School.....	76	Average per cent.
First Grammar—1 School.....	69	“ “
Second Grammar—3 Schools.....	73	“ “
Third Grammar—5 Schools.....	70	“ “
Fourth Grammar—10 Schools.....	74	“ “
First Primary—8 Schools.....	76	“ “
Second Primary—5 Schools.....	68	“ “
Third Primary—10 Schools.....	77	“ “
Fourth Primary—13 Schools.....	76	“ “
Fifth Primary—12 Schools.....	84	“ “
Sixth Primary—9 Schools.....	74	“ “

Total Average of White Schools, 75 per cent.

## COLORED SCHOOLS.

Third Grammar—2 Schools.....	72	Average per cent.
Fourth Grammar—4 Schools.....	73	“ “
First Primary—5 Schools.....	67	“ “
Second Primary—3 Schools.....	67	“ “
Third Primary—8 Schools.....	73	“ “
Fourth Primary—11 Schools.....	73	“ “
Fifth Primary—7 Schools.....	68	“ “
Sixth Primary—5 Schools.....	66	“ “

Total Average of Colored Schools, 70 per cent.

Per centage of various groups of schools :

## WHITE SCHOOLS

Cherry Street—4 Schools.....	78	Average per cent.
Brook Avenue—4 Schools.....	66	“ “
Leigh—13 Schools.....	77	“ “
Central—11 Schools.....	84	“ “
Bellevue—12 Schools.....	74	“ “
Bethel—6 Schools.....	73	“ “

## COLORED SCHOOLS.

Baker—9 Schools.....	66	Average per cent.
Navy Hill—9 Schools.....	76	“ “
12th and Leigh Streets—4 Schools.....	75	“ “
Valley—6 Schools.....	68	“ “

Total Average of Colored Schools, 70 per cent.

Average for City, (white and colored,) 73 per cent.

As the result of this examination, about 50 per per cent. of the scholars examined were promoted to a higher grade.

Of the twenty-five scholars in the First Grammar, fifteen were promoted to the High School. All the scholars of the Advanced Grammar will enter the High School.

The written answers of each scholar are on file in my office, and are open to the inspection of those interested.

Public examinations were held in each of the colored schools on June 26th, and in each of the white schools on June 28th.

The closing exercises and distribution of medals and diplomas took place in the grouped colored schools on June 27th, and in the white schools on June 25th. These exercises were attended by the President and members of the Board, members of the City Council, and large crowds of ladies and gentlemen.

#### TEXT BOOKS.

The Text Books used in the schools have, with one or two exceptions, been found well suited to our wants, and any very sudden or radical change would result in injury to the system and decrease the efficiency of the schools.

Experience has demonstrated the necessity for giving to cities a much larger latitude in the selection of text books than is advisable in towns and counties. I propose, for the next session, that you add to our list of books a supplemental series of readers, and a spelling or word book for the more advanced classes.

If the State Board should decide that we must, in our selection, conform strictly to the list prescribed for the State, I am confident that they will exercise that liberality which has always characterized their action in reference to our city schools, and will give us all the latitude that in their judgment may be just and legal.

The following is a list of

## TEXT BOOKS

*Used in the Public Schools of Richmond, Va., 1871 and '72:*

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## PRIMARY SCHOOLS.

Holy Bible.  
 McGuffey's First Reader.  
 McGuffey's Second Reader.  
 McGuffey's Third Reader.  
 McGuffey's Fourth Reader.  
 McGuffey's Spelling Book.  
 Webster's Primary Dictionary.  
 Webster's Common School Dictionary.  
 Hart's First Lessons in Composition.  
 Cornell's Primary Geography.  
 Quackenbos' Primary Arithmetic.  
 Quackenbos' Elementary Arithmetic.  
 Quackenbos' Mental Arithmetic.  
 Walton's Arithmetical Tables.  
 Spencerian Copy Books.

## GRAMMAR SCHOOLS.

Holy Bible.  
 McGuffey's Fourth Reader.  
 McGuffey's Fifth Reader.  
 McGuffey's Spelling Book.  
 Webster's High School Dictionary.  
 Webster's Academic Dictionary.  
 Cornell's Intermediate Geography.  
 Quackenbos' Mental Arithmetic.  
 Quackenbos' Elementary Arithmetic.  
 Quackenbos' Practical Arithmetic.  
 Walton's Arithmetical Tables,

Goodrich's Child's History of U. S.  
 Goodrich's History of U. S.  
 Harvey's Elementary Grammar.  
 Harvey's Practical Grammar.  
 Spencerian Copy Books.  
 Goodrich's History of England.  
 Cornell's Physical Geography.  
 Davies' Algebra.  
 Quackenbos' Natural Philosophy.  
 Quackenbos' Composition.  
 Hart's First Lessons in Composition.  
 Bingham's Latin Grammar.  
 Bingham's Cæsar.

#### DEATHS.

Since my last report, two of our teachers have died. Miss Mary S. Chenery was a young lady of more than ordinary ability. She had been connected with Public Schools since their establishment in this city, and by her zeal, enthusiasm and urbanity, had won the esteem of superintendent, teachers and scholars.

Miss Mary A. Walker taught in the school at Belle Isle, and had been connected with the schools only during the past session. She was an earnest and conscientious worker, and had endeared herself to her pupils, whose tears were freely shed over the grave of their departed teacher.

It affords me melancholy pleasure to bear witness to the faithful and successful labors of these two ladies.

#### TEACHERS.

The enthusiasm and untiring devotion to duty of our teachers, continue to merit the highest commendation. Their eagerness to seek after the most approved methods of in-

struction, and after careful trial and consideration, their willingness to adopt such as are found suited to the wants of our system, are very encouraging proofs of that progressive spirit so necessary to success in any profession, but particularly in that of teaching.

That some fail to meet the requirements of the system, is not surprising, but it is rather to be wondered at that, in the entire absence of normal training, so many should so readily adapt themselves to the novel and to them peculiar methods of public school instruction.

Professional works on teaching and educational periodicals are very generally read, and much valuable and practical information is obtained. They no longer regard the teacher's occupation as one to be adopted only after all other means of support have failed, but they look upon it as a profession and feel that to secure success in it requires earnest, constant and laborious daily preparation. They feel that the teacher must grow daily, and to that end must be an earnest, active student.

I feel confident that in no part of our State can be found a corps of more faithful and generally more progressive teachers than we have in this city. I am happy to be able to say that the old fallacy that "anybody can teach a primary school" is gradually yielding to the light of observation and experience. The fact that it requires more *tact*, more *perseverance*, and more real *teaching talent* to conduct a successful primary school than for one of a higher grade, is being daily demonstrated to those of our citizens who are sufficiently interested in our schools to visit them frequently.

I feel that it cannot be too strongly impressed upon our people that primary schools are the root and foundation of a successful system of public schools. As they succeed, so will

the grammar and high schools advance ; but if they fail, the higher schools must necessarily be less efficient.

Let us then exercise great care and judgment in the selection of our primary teachers, because it is here that the old maxim "as is the teacher, so is the school" applies in all its height, and length and breadth.

In the higher, as well as in the lower schools, we should endeavor, as far as practicable, to employ such teachers as intend making teaching a profession.

I forbear saying anything on the subject of compensation, as I am satisfied that as our schools and teachers increase in efficiency the public mind will become so educated as to authorize you to pay such salaries as I know your judgment now dictates.

#### TEACHERS' INSTITUTE.

The weekly meetings of our teachers for consultation, encouragement and mutual improvement, was continued during the past session.

In the eminently practical character of these meetings consists their value.

If an error in teaching any subject or in any method of discipline is observed by the Superintendent in his visits among the schools, the correction can be applied to all the schools and uniformity secured by the discussion of the subject in the teachers' meeting.

The methods of each teacher for correcting certain prominent faults are discussed in a conversational style, and the various practical details of the school-room are freely talked over. These meetings have been useful in arousing professional activity, and much of the enthusiasm of our teachers has its origin here.

During the past session I have held primary and grammar

teachers' meetings on alternate Saturdays, at 10 A. M., and a meeting for the colored teachers, at 4 P. M.

Although much of my time, that might have been devoted to visiting and general supervision of the school, has been occupied in the preparation necessary for the proper conduct of these meetings, yet I feel that the results have fully compensated me for the time and labor devoted to this purpose, and that the schools have received more substantial benefit through the teachers than could have been obtained in any other way.

Miss Kate Manly rendered us very valuable assistance by giving instruction in Calisthenics. The Principals and Teachers unite with me in returning our acknowledgements for her kindness.

For the next session, I propose to have a more thorough organization, by dividing the labor among the several principals, giving to each a particular subject on which he will be expected to thoroughly inform himself, and be prepared to give the results of his observation and thought, when the subject is under discussion in the meeting. In this way, I hope to arouse a still deeper interest and add greatly to the benefits to be derived.

#### PRINCIPALS.

The plan of grouping our schools and placing each group in charge of a principal, with specifically defined duties and authority, has proved a most valuable auxiliary in promoting the general efficiency of the schools. Many minor details that had previously occupied much of the time and attention of the Superintendent, have been transferred to the principals, thus enabling him to devote more attention to the discharge of his legitimate duties—the inspection of schools and general supervision of the work.

I have found the principals earnest and faithful in the dis-

charge of their duties; and although the executive ability of some was more marked than that of others, yet I have no cause for complaint, believing that all did their duty to the best of their ability.

I am indebted to many of them for valuable suggestions during the session, and to all for their cordial co-operation and assistance.

Your attention is respectfully called to the necessity for paying our principals such salaries as their services and ability warrant. Most of these gentlemen have families, and are entirely dependent on their salaries. I do not deem it necessary to do more than call your attention to the subject, as I feel confident that you will apply such remedy as in your judgment may be just.

I desire to call special attention to the efforts made by these gentlemen to prepare themselves for the successful discharge of their duties.

Immediately after their election, in August, they visited the cities of Baltimore, Philadelphia and New York, for the purpose of becoming acquainted, by *actual inspection*, with the best methods of instruction and discipline pursued in the public schools of those cities. I am confident that what they saw and heard on this trip, greatly aided them in the prosecution of their duties during the past year, and enabled them much more rapidly to conform to what was to them a comparatively new system of teaching school.

#### PLAN OF INSTRUCTION.

During the past session, we have endeavored to conform our instruction more closely to the "Outline Course" than was possible during the previous sessions. The change of the grades from Primary, Intermediate and Grammar, to Primary and Grammar, proved decidedly beneficial, as it greatly simpli-

fied the classification of the schools, and enabled us to define the grades more distinctly. When the "Outline Course" for the High School has been fixed, our gradation will, *for the present*, be complete.

The experience of the past year has shown that some few changes might be advantageously made in our "Outline Course," but I have been unwilling to make any suggestions on this subject until the experience of another session should demonstrate more clearly the changes advisable.

Our general method of instruction has not been materially altered. We have endeavored to carefully watch the educational progress of the country, and keep in the line of progress, or at least not to get behind the times.

#### ORAL INSTRUCTION.

Our teachers are beginning to more fully appreciate the great benefit to be derived from systematic oral instruction, especially in the Primary grades. By its proper use we are enabled more successfully to use what the child knows, in order to teach him what he does not know, and to cultivate that observation and thought so necessary in all substantial education. We find that children who have, by oral instruction, been taught the general principles of Arithmetic, Grammar and Geography, advance much more rapidly and have a more comprehensive and sensible idea of the subject when advanced to a higher grade where they begin the use of the text book. The careful thought and preparation required of the teacher before bringing the subject before the class, tends to awaken a spirit of inquiry and research so necessary for successful instruction.

#### ALPHABET.

The *word and phonic methods* are used in our schools, and their success warrants their continuance. A very large pro-

portion of the children that come into our schools without knowing a letter, begin to read in two months, and before the close of the session, read well in the First or Second Reader. By reading well, I mean that they read in an easy, natural manner, as they talk.

#### READING.

“To make a child read well, the *true conditions of good reading* should be secured. Intelligence and sympathy should be aroused—artificial constraints and embarrassments removed. These conditions secured, reading instead of the most embarrassing and difficult of school exercises, will become the easiest and most natural.”

“It is easier to form a habit than to correct one” applies to instruction in reading as forcibly as to any thing else. Many of the pupils in the higher grades read far worse than those in the lower grades. They come into our schools with fixed habits of mechanical, expressionless reading, and our teachers find great difficulty in even partially correcting these faults. Much of this bad reading is “owing mainly to the artificial, unnatural methods” of instruction pursued in their earlier years, as we believe that “children are good readers by nature, as they are in the main good talkers, if interested and unconstrained.”

By a continued effort to correct the bad habits of the older pupils, and by making good readers of the younger pupils, we hope, gradually, to bring out good results. A teacher who is a good reader and will let her voice be frequently heard during the recitation, will be very apt to correct many of the errors into which pupils are usually led.

#### SPELLING.

“Spelling is always in order” has been the rule by which our teachers have worked.

Oral spelling has not been omitted, but written spelling has received more attention, as children frequently spell well orally when they write very incorrectly.

The old method of pronouncing the syllable is entirely ignored in our schools, and its success justifies continuance of the method explained in my last report.

During the past session, each pupil in the First and Second Primary and in the Grammar grades, was required to have a blank book, called "Spelling Exercise Book," in which were written the words dictated by the teacher, and written by the scholar at each recitation. At the close of the recitation these books were collected, corrected and retained by the teacher until the next recitation.

The following list gives the number of words spelled and number misspelled by the scholar in each grade receiving the silver medal for the best book in the grade :

#### WHITE SCHOOLS.

First and Advanced Grammar—Fannie L. Power....	1,390	spelled,	1	misspelled.
Second Grammar—Clelia R. Crespi.....	1,100	"	0	"
Third Grammar—Delia Peasley.....	2,760	"	0	"
Fourth Grammar—Jennie Bernard.....	1,200	"	1	"
First Primary—Jeanetta Stern.....	960	"	1	"
Second Primary—Argie Carneal.....	1,000	"	1	"

#### COLORED SCHOOLS.

Third Grammar—Rosina Cox.....	1,040	spelled,	3	misspelled.
Fourth Grammar—Victoria Pollard.....	860	"	4	"
First Primary—Eliza J. Brown.....	1,260	"	0	"
Second Primary—Hester Cheatham.....	840	"	25	"

These facts speak for themselves.

#### ARITHMETIC.

We endeavor to develop the first ideas of number by association with tangible objects, such as marks on the black-

board, balls on the numeral frame, &c. As the scholar progresses we deduce the rule from the example, by causing the child to tell *what he does at each step* in the example worked on the board or slate. The memorizing of rules before a practical acquaintance with methods, is regarded as time wasted.

The progress made in this study has been generally satisfactory.

#### GEOGRAPHY.

In this study our teachers try to use the knowledge which the child has of the physical features of the country immediately around him, as means for the gradual and thorough comprehension of the general physical features of land and water. The ideas of location, distance and shape, are gradually developed by the drawing of maps of the school-room, yard, &c. In all the grades we regard the map as the *key* to the study of Geography.

I think we are improving in our methods of teaching this subject, and hope for even better results for the next session.

#### GRAMMAR.

Our instruction in this study is based on the idea that the child begins the study of grammar as soon as he enters the school. If the teacher is careful never to permit an incorrect expression to be used without correction, and always uses grammatical language before her children, the foundation is laid for the oral instruction in technical grammar, which is begun in the First Primary. The text-book is not used until the scholars enter the Grammar grades.

#### COMPOSITION.

Composition, oral and written, has been found a valuable aid. Much valuable instruction has been imparted by our teachers, and the progress has generally been satisfactory.

## PENMANSHIP.

As intimated in my last report, we have endeavored to teach this subject with more system and accuracy than was done the previous sessions. In the month of October the proprietors of the Spencerian system of copy books sent us an expert teacher of writing, who spent three weeks in instructing our teachers in the principles and methods of teaching the Spencerian system of Penmanship. During the past session we have been trying to break up old habits of position, pen-holding, &c., and I think, we can now say, we have fairly inaugurated the new system. After our teachers become familiar with the system and have more experience in the practical application of the principles, we expect better success. Our experience of the past year has demonstrated that penmanship can be taught as systematically as arithmetic, and that if the same careful training is given, equally as certain and satisfactory results can be brought out.

## VISITING.

In addition to the performance of the various routine duties of my office, consolidating and correcting reports, receiving and escorting visitors, &c., I have made, during the last session, fifteen hundred and ten (1,510) visits to the various schools. Regarding supervision as a very essential element of success in any school system, I have devoted as much of my time as possible to this work.

I have required weekly reports from the principals, stating the number and character of the visits paid by each during the week, and the result of his observations. Much valuable information in reference to methods of instruction and modes of discipline has thus been obtained, and many faults corrected which might otherwise have been unnoticed.

By these means I have been able to have a general survey

of the whole work, and have endeavored to make such suggestions and apply such corrections as were deemed advisable.

### HIGH SCHOOL.

Your recent action in deciding to open, for the next session, a High School, is a step in the right direction, and must materially add to the tone and vigor of our system.

Before the opening of the schools, I will present, for your consideration, an *outline course of study*, with a list of text books for the school.

The necessity for the erection of a suitable building, combining all the modern improvements and appliances, is fully appreciated by you and needs no urging from me. After the High School has been fully organized and is in good working order, I propose to recommend the addition of a Normal or Training School, where we can prepare our own girls and boys to take positions in our schools as teachers.

The only way in which any Public School system can supply its demand for teachers, is by creating a supply.

### GERMAN.

During the past session there were 621 scholars studying German under the instruction of two male teachers. The introduction of any new branch of study in the schools is always attended with more or less difficulty, and it would not be either wise or just to form any positive opinion about the general utility of any study from its apparent success or failure for the first session.

The irreconcilable difference of opinion between the two German teachers, as to the best books to be used, and the consequent want of uniformity in instruction, compels me to recommend that you appoint one Principal teacher, with such assistants as may be needed. The Principal to have the di-

rection and control of the instruction in German, and to be held responsible for the results.

### PRIZES.

The system of prizes and diplomas adopted during the past session, was productive of good, and I recommend its continuance for the next session. For the information of those interested, I give the system as adopted :

### RICHMOND PUBLIC SCHOOLS.

SESSION 1871 and 1872.

### PRIZES.

One Silver Medal in each grade of schools for the best Spelling Exercise Book in the grade.

The Committee on Teachers and Schools to make the award.

Orthography and Penmanship to be considered.

Teachers will select the books to be forwarded for examination.

The number of books from each school not to exceed six.

No book re-written or corrected after the regular lesson will be forwarded.

Books to be in Superintendent's office on or before June 20th.

First Grammar and Advanced Grammar to be considered as one grade.

### FIRST HONOR.

In each school one Silver Medal as the First Honor, for punctuality, exemplary conduct and excellence in scholarship.

The scholarship to be decided by the written examination at the close of the session.

### DIPLOMAS.

*For Attendance.*—To every scholar who shall be present and punctual at every school session during the year.

*For Deportment.*—To every scholar who shall receive no demerit mark for deportment during the year.

*For Scholarship.*—To the six pupils in each school who shall be best in studies; to be determined in the Grammar and First and Second Primary Schools by the marks given for the written examination, and in the 2d, 4th, 5th and 6th Primary Grades by the average marks for the year.

No scholar to receive a diploma unless the general average is above 75 per cent.

*For Penmanship.*—To the scholar in each school who shall make the greatest improvement in penmanship during the year.

#### REGULATIONS.

Pupils who are transferred from one school to another during the year, are entitled to credit for their record during the year.

Not more than *one* diploma shall be given to any pupil, but on each shall be stated all the above particulars in which the recipient shall excel.

Those who receive medals, as the *First Honor*, shall not receive diplomas.

The award shall be made by the teachers, with the advice and consent of the Principal and Superintendent.

The Prize List to be made out and returned to the office of the Superintendent by June 20th.

#### VISITORS.

During the past session, the schools have been visited 896 times by members of the Board, and 2,829 times by parents and friends.

The Committee on Schools and Colleges of Virginia House of Delegates, devoted an entire day in February to the inspection of our schools.

Many of our citizens have the impression that visitors interrupt the school duties. This is an entire mistake, as we are always ready and anxious to receive visitors and show the workings of our schools. If more of those who are skeptical

on the subject of public schools would visit us, we should have more converts, as inspection seems to be the only certain remedy for skepticism.

#### SUGGESTIONS.

1. The efficiency of our schools would be greatly increased by a longer session—three months' vacation is longer than is needed by teachers or scholars.

2. I anticipate a large increase of scholars for the next session, and would recommend that prompt measures be taken to secure increased accommodations.

3. The very great value of the study and the very satisfactory efforts of many distinguished scientists to put the elements of natural science in a shape suited to the comprehension of young children, warrants me in suggesting the gradual introduction of instruction in natural science into our course of study.

The following extract expresses what seems to be the generally received opinion among prominent educators: "A great superiority of science over language as a means of discipline, is, that it cultivates the judgment. As in a lecture on mental education, delivered at the Royal institution, Professor Faraday well remarks, the most common intellectual fault is deficiency of judgment. He contends that "society, speaking generally, is not only ignorant as respects education of the judgment, but it is also ignorant of its ignorance." And the cause to which he ascribes this state, is want of scientific culture. The truth of his conclusion is obvious. Correct judgment with regard to all surrounding things, events and consequences, becomes possible only through knowledge of the way in which surrounding phenomena depend on each other. No extent of acquaintance with the meaning of words, can give the power of forming correct inferences respecting causes and effects. The constant habit of drawing conclusions from data, and then

of verifying those conclusions by observation and experiment, can alone give the power of judging correctly. And that it necessitates this habit, is one of the immense advantages of science'.—[*Herbert Spencer*.

4. The experience of the past year has demonstrated the necessity for a large assembly hall in the central portion of the city. There is ample space in the grounds attached to the Central School for such a building.

#### THANKS.

To the members of Press I return my sincere thanks, for the very great interest manifested in our schools, and for many courtesies extended.

The Chief of Police and his assistants have been prompt in correcting all irregularities reported to them.

To the President, Secretary and members of the Board, I am under obligations, for the uniform courtesy extended and kind assistance rendered. I am indebted to them for the unanimity with which they have adopted my suggestions, and supported me in the discharge of my duties.

#### CONCLUSION.

I think we can now say that we have made a fair beginning. Aided by the liberality of the City Council, sustained by your zealous and faithful co-operation, and advanced by the earnestness and ability of our teachers, we have succeeded in laying a solid foundation for our future educational edifice. If we but continue the march of improvement, our system will gradually instil into the hearts of our people an enthusiasm in the cause of public education, that will sweep away all opposition and enable you to raise the schools to that perfection so earnestly desired and faithfully striven for by all of us.

Respectfully submitted,

J. H. BINFORD,  
Supt. of Schools.

**A**NNUAL **R**EPORT

OF THE

**Auditor of the City of Richmond,**

FOR THE

*Year ending January 31st, 1873.*



# ANNUAL REPORT

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CITY AUDITOR'S OFFICE,  
RICHMOND, VA., February 24th, 1873.

*Hon. A. M. Keiley, Mayor of the City :*

DEAR SIR—I have the honor to present the accompanying statements and exhibits appertaining to the business of this office, viz :

**A**—Statement of receipts and disbursements for the year ending 31st January, 1873.

**B**—Statement of assets.

**C**—Statement of liabilities.

**D**—Estimate of expenditures for the year ending 31st January, 1874.

**E**—Estimate of receipts for the year ending 31st January, 1874.

**F**—Statement of appropriations and expenditures for the year ending 31st January, 1873.

**G**—Bonded debt of the city.

**H**—Maturity of bonded debt.

Respectfully submitted,

J. B. ROYSTER, *Auditor.*

## A.

*Statement of the City Auditor for the fiscal year ending 31st  
January, 1873.*

## RECEIVED ON ACCOUNT.

---

Bills receivable.....	\$1,850 90
Bills payable, in settlement of sundry claims.....	\$158,241 39
Bills payable, on account of temporary loans.....	590,026 24
	<hr/> 748,267 63
Board Education, nett sales \$8,200 8 per cent. bonds.....	8,170 00
City grounds and buildings.....	17 30
City culverts.....	340 93
City hands and carts.....	107 67
Committee reduction City debt, interest on City bonds.....	2,812 67
Cleaning streets, &c., sale of garbage....	142 75
Chesapeake and Ohio Railroad Company, interest.....	2,706 00
Chairman Finance Committee, nett sales six and eight per cent. bonds.....	128,624 11
Construction Gas Works.....	865 52
Construction Water Works.....	1,998 55
City Seal.....	22 00
Discount on bonds sold, premium on \$6,000 eight per cent. bonds.....	37 63
Expenses Gas Works, sale of coke, &c....	8,785 89
do. Almshouse, of Henrico Poor....	683 50
do. First Market, Rents, &c.....	9,515 36
do. Second Market, Rents, &c.....	7,735 57
do. Seabrook's Warehouse, fees, &c.	5,218 75
do. Oakwood Cemetery, graves and sale of lots.....	1,628 82
do. Shockoe Hill Cemetery, graves.	592 75
Fire Department, sale of horses and iron.	143 75
Fines and penalties.....	3,480 33

Gas receipts, Monroe Ward....	30,878	26	
do. Jefferson Ward...	39,660	97	
do. Madison Ward...	81,471	72	
			152,010 95
Interest on City debt, over payment re-			
funded.....			31 68
James River Improvement, of W. G. Tur-			
pin.....	1,235	54	
James River Improvement,			
sale of \$18,400 eight per cent.			
bonds.....	18,710	63	
			19,946 17
License tax 1871.....			10 00
Police contingent fund.....			300 00
Redemption of lots sold for taxes.....			1,501 04
Rents from public buildings.....			744 66
Regnault, John F., City Collector :			
Delinquent con. Gas bills..	175	55	
Delinquent Gas bills.....	1,037	03	
Licenses, 1872.....	28,094	92	
City taxes, 1871.....	16,703	63	
City taxes, 1872.....	450,318	46	
			496,329 59
Tax on billiard tables.....			262 50
Hawkers and pedlars.....			127 75
Shows and theatres.....			549 75
Goats.....			236 75
Dogs.....			6,678 50
Wagons and carts.....			7,545 75
Hacks and carriages.....			1,143 75
Sample merchants.....			170 00
Insurance companies.....			3,992 07
Hauling cars through streets.....			608 00
Water rents.....			53,963 73
Total receipts.....			1,679,901 02

## DISBURSED ON ACCOUNT.

Bills payable.....	\$570,487	70
Board Health.....	1,104	25
Board Education.....	66,177	72
Bridge over Bacon's Quarter Branch.....	884	61
Bridge foot Ninth street.....	831	65
Coal for Gas Works, 8,728 tons, 219 lbs...	52,950	75

City Police.....	81,951 94
City grounds and buildings.....	7,104 46
City Hospital.....	3,622 52
City culverts.....	26,393 14
City hands and carts.....	29,884 55
City Attorney.....	2,000 00
Chain Gang.....	2,958 46
Contingent fund.....	10,015 91
Coroner's inquests.....	1,412 65
Construction Gas Works.....	15,224 38
Construction Water Works.....	17,808 57
Construction City Almshouse.....	209 30
College Dispensary.....	250 00
College Infirmary.....	258 00
Confederate dead at Oakwood Cemetery.	324 00
Courts and Juries.....	7,873 44
Catching Dogs.....	45 00
Discount and interest.....	15,676 26
Expenses Gas Works.....	93,051 77
Water Works.....	24,612 22
Almshouse.....	29,040 74
City elections.....	6,443 28
First Market.....	3,194 55
Second Market.....	2,165 85
Seabrook's Warehouse.....	618 44
Oakwood Cemetery.....	2,524 79
Shockoe Hill Cemetery.....	1,238 80
Enlargement Second Police Station.....	1,700 00
Extension City Water Works... 38,763 80	
do. do. to Clay	
street.....	146 80
Exten'n City Works to Church	
Hill.....	2,198 57
Exten'n City Works to Euker's,	2,923 20
do. do. to Oregon	
Hill.....	7,217 60
	<hr/>
	51,249 97
Friends' Colored Orphan Asylum.....	1,000 00
Fire Department.....	36,107 24
Fire Alarm and Police Telegraph.....	2,198 00
Fines and penalties.....	10 00
Fuel for the poor.....	1,218 00
Female Humane Association.....	1,000 00
Fuel for public buildings.....	917 97

Flagging.....	979 90
First Virginia Regiment.....	2,500 00
Grading Nicholson street.....	1,305 75
Twenty-sixth street.....	1,238 68
Ashland street.....	831 64
Interest on City debt.....	201,178 83
James River improvement.....	92,279 07
Improvement Monroe Square.....	70 00
James River Bridge Company.....	55,000 00
Lunacy Commission.....	125 00
Lettering street lamps.....	116 04
Medicines for the poor.....	375 00
New Gas Holder.....	23,308 61
New Council Chamber.....	59 25
Numbering houses.....	305 70
Pensioners.....	360 00
Purifying Gas House building.....	18,325 32
Poor of the City.....	4,065 45
Police contingent fund.....	599 48
Pay of Magistrates.....	800 00
Paving sidewalks and alleys.....	1,371 26
Paving Twentieth street.....	2,629 01
Removing Earth, &c.....	222 55
Repairs to streets.....	8,880 33
Rents.....	35 02
Richmond Male Orphan Asylum.....	1,000 00
Re-grading Main street.....	2,334 32
do Cary street.....	2,529 25
Six per cent. Registered bonds, redeemed,	12,302 50
St. Joseph's Asylum.....	1,000 00
St. John's Burying Ground.....	246 12
Salary of Officers.....	20,279 48
Street contingent fund.....	5,784 46
Streets in Jefferson Ward.....	6,560 70
Clay Ward.....	12,128 46
Marshall Ward.....	1,951 65
Monroe Ward.....	2,883 73
Madison Ward.....	3,424 65
Jackson Ward.....	5,503 21
Stationery and Printing.....	4,333 10
Sewerage map.....	3 50
Salt furnished the City in 1863.....	6,267 40
St. Paul's Church Home.....	500 00

Steam roller and crusher, cost..	7,269 60	
Expenses working same...	2,386 35	
	<hr/>	9,655 95
Sewer connections .....		1,322 00
Taxes refunded .....		1,220 57
Widening Baker street .....		100 00
	<hr/>	
Total disbursements .....		\$1,692,033 82
Balance in City Treasurer's hands, morn- ing 1st February, 1872 .....		23,760 16
Balance carried down .....		11,627 36
		<hr/>
	\$1,703,661 18	1,703,661 18
	<hr/>	<hr/>
Balance on hand, morning 1st February, brought down .....		\$11,627 36

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

## B.

## ESTIMATE OF ASSETS, 1ST FEBRUARY, 1873.

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Treasurer's balance, this day .....	\$11,627 36
Bills receivable, S. J. Carrington .....	848 03
do. James River and Kanawha Co.... 200,000 00	
25 months' interest on do..... 25,000 00	
	<hr/>
	\$225,000 00
Delinquent Taxes, 1872 .....	18,000 00
Almshouse, grounds and buildings .....	80,000 00
Water Works, do. ....	1,000,000 00
Gas Works, do. ....	800,000 00
Washington Hall. do. ....	25,000 00
City Hall, do. ....	40,000 00
Central Square .....	12,000 00
Monroe Square .....	70,000 00
Marshall Square .....	16,000 00
Oakwood Cemetery and grounds .....	10,000 00
Seabrook's warehouse .....	65,000 00
First Market property .....	105,000 00
Second Market property .....	55,000 00
Lancasterian School House and grounds .....	33,000 00
Seaman's Bethel, do .....	4,000 00
Engine house and lot, Marshall street .....	5,240 20
do. Third street .....	3,000 00
do. Eighteenth street .....	3,000 00
do. Twenty-fifth street .....	3,516 77
Lot on First street .....	750 00
do. Dock street .....	10,000 00
do. Clay street .....	2,500 00
do. Canal street .....	4,000 00
do. Lester street .....	1,500 00
do. Cary and Canal streets .....	2,500 00
do. St. Stephen street .....	1,604 50
Clark's Spring property .....	15,000 00
Personal property of the City .....	50,000 00

Overdrawn on account of appropriations :

Board of Health.....	926 77
City Gas Works.....	5,757 66
City Water Works.....	1,951 16

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8,635 59

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\$2,681,722 45

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

C.

# LIABILITIES, 1ST FEBRUARY, 1873.

Bonds, Six per cent. Registered.....	\$2,984,903 47	
Six per cent. Coupons.....	157,000 00	
Eight per cent. Registered.....	79,600 00	
Eight per cent. Coupons.....	197,000 00	
	<hr/>	\$3,418,503 47
Balance of interest due on above.....		10,205 44
Bills Payable—due February, 1873.....	50,466 14	
Due March, 1873.....	142,874 87	
Due April, 1873.....	26,826 24	
Due May, 1873.....	6,985 02	
Due July, 1873.....	8,000 00	
Due August, 1873.....	600 00	
	<hr/>	235,752 27
Unexpended Balances of Appropriations:		
To James River improvement.....	54,861 02	
To Board of Education.....	26,557 70	
To City Police.....	2,448 58	
To grounds and buildings.....	1,910 82	
To culverts.....	1,972 73	
To hands and carts.....	1,121 20	
To Chain Gang.....	41 54	
To contingent fund.....	1,724 54	
To Courts and Juries.....	126 56	
To Almshouse and poor of City.....	3,367 81	
To elections.....	156 72	
To Shockoe Hill Cemetery.....	61 20	
To Oakwood Cemetery.....	1,751 21	
To James River Bridge Company.....	25,000 00	
To Pensioners.....	120 00	
To revision of Ordinances.....	1,000 00	
To stationery and printing.....	272 59	
To steam roller and crusher.....	250 95	
To streets generally.....	4,508 15	

To taxes refunded.....	98 70	
To extension of Water Works.....	159,049 03	
To Fire Department.....	343 03	
Fire Telegraph, &c.....	154 08	
	<hr/>	286,898 16
		<hr/>
		\$3,951,359 34

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

## D.

*Estimate of Expenditures for the fiscal year ending 31st  
January, 1874.*

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For bills payable in payment of claims.....	\$77,726 03	
do. do. loans.....	158,026 24	
	<hr/>	235,752 27
Discount and interest on bills payable.....		15,000 00
City Hospital and Board of Health.....		4,500 00
City Police and Police contingent fund.....		85,000 00
Grounds and buildings.....		12,000 00
Streets generally.....		60,000 00
Culverts.....		25,000 00
Sewer connections—Ordinance 24th June, 1872,		5,000 00
Hands and carts.....		30,000 00
Chain Gang.....		3,000 00
Contingent fund.....		15,000 00
Elections—May and November.....		6,500 00
Courts and Juries.....		8,000 00
Oakwood Cemetery.....		3,000 00
Shockoe Hill Cemetery.....		1,300 00
Friends' Colored Orphan Asylum.....		1,000 00
Female Humane Association.....		1,000 00
Richmond Male Orphan Asylum.....		1,000 00
St. Joseph's Asylum.....		1,000 00
St. Paul's Church Home.....		500 00
St. John's Burying Ground.....		200 00
Pensioners.....		240 00
Poor of the City.....		35,000 00
Fuel for the poor.....		3,000 00
Fire Department.....		30,000 00
Fire Alarm Telegraph.....		2,500 00
Revision of Ordinances.....		1,000 00
Stationery and printing.....		4,500 00
Salary of officers.....		23,000 00
Construction Gas Works.....		15,000 00
Expenses Gas Works.....	}	145,000 00
Coal for Gas Works.....		

Construction Water Works.....		18,000 00
Expenses Water Works.....		25,000 00
Extension of Water Works :		
Appropriation.....	\$200,000 00	
Expended on account.....	40,962 37	
	<hr/>	159,037 63
Steam roller and crusher.....	2,500 00	
Taxes refunded.....	1,400 00	
James River Bridge Company :		
Appropriation.....	80,000 00	
Expended on account.....	55,000 00	
	<hr/>	25,000 00
James River Improvement :		
Appropriation, 8 per cent. bonds, \$100,000 00		
Sold on account.....	18,400 00	
	<hr/>	81,600 00
Less balance at debit.....	25,192 81	
	<hr/>	56,407 19
Board of Education.....		60,000 00
Interest on bonded debt.....		230,000 00
		<hr/>
		\$1,350,337 09

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

## E.

*Estimate of Receipts—except Taxes and Licences—for the  
fiscal year ending January 31st, 1874.*

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Balance in Treasurer's hands 1st February, 1873.....	\$11,627. 36
From Bills receivable, S. J. Carrington, 4th April, 1873.....	848 03
Interest on Bond of James River and Kanawha Company for \$200,000, from January 1st, 1871, to 31st January, 1874— thirty-seven months.....	37,000 00
First Market.....	9,500 00
Second Market.....	7,500 00
Seabrook's warehouse.....	5,200 00
Rents of other property.....	700 00
Oakwood Cemetery.....	1,600 00
Shockoe Hill Cemetery.....	550 00
Billiard tables.....	250 00
Hawkers and pedlars.....	125 00
Shows and theatres.....	500 00
Goats.....	200 00
Dogs.....	6,250 00
Wagons, carts and drays.....	7,500 00
Hacks and omnibuses.....	1,100 00
Fines and penalties.....	3,250 00
Water receipts.....	55,000 00
Gas receipts.....	152,000 00
Sale of coke, &c.....	8,500 00
Delinquent gas bills.....	1,000 00
Metre connections.....	800 00
Delinquent taxes and licenses, 1871 and 1872.....	16,500 00
Redemption of lots.....	1,500 00
Culvert connections, ordinance 24th June, 1872.....	400 00
Tax on insurance premiums.....	5,000 00
	<hr/>
	\$334,400 39

J. B. ROYSTER, Auditor.

FEBRUARY 24TH, 1873.

## F.

*Disbursed by City Auditor on account Appropriations, for  
the fiscal year ending 31st January, 1873.*

		UN-PAID.	OVER-PAID.
BOARD OF HEALTH.			
Disbursed.....	1,104 25		
Disbursed City Hospital.....	3,622 52		
	—————	4,726 77	
Less appropriation.....	3,800 00		
	—————		926 77
BOARD OF EDUCATION.			
Disbursed.....	66,177 72		
Balance appropriation, 1871.	22,629 32		
Appropriation, 1872.....	33,000 00		
Account appropriation in bonds .....	40,000 00		
	—————	95,629 32	
		—————	29,451 60
CHARITABLE INSTITUTIONS.			
Female Humane Association, appropria- tion .....	1,000 00		
Disbured .....	1,000 00		
	—————		
Friend's Colored Orphan Asylum, appro- priation .....	1,000 00		
Disbursed.....	1,000 00		
	—————		
Richmond Male Orphan Asylum, appro- priation.....	1,000 00		
Disbursed.....	1,000 00		
	—————		
St. Joseph's Asylum, appropriation.....	1,000 00		
Disbursed .....	1,000 00		
	—————		

St. Paul's Church Home.....	500 00
Disbursed.....	500 00

## CITY POLICE.

Appropriation.....	85,000 00	
Disbursed on acc't City Police.	81,951 94	
Do. Police contingent fund....	599 48	
	<u>82,551 62</u>	
		<u>2,448 58</u>

## CITY GROUNDS AND BUILDINGS.

Appropriation.....	12,145 96	
Appropriation account, First Market.....	804 68	
do. Second Police Station,	5,000 00	
	<u>17,950 64</u>	
Disbursed on account City grounds and buildings....	7,104 46	
Disbursed on account fuel for public buildings.....	917 97	
Disbursed on account improvement Monroe Square.....	70 00	
Disbursed on account expenses First Market.....	3,194 55	
Disbursed on account expenses Second Market.....	2,165 85	
Disbursed on account expenses Seabrook's warehouse.....	618 44	
Disbursed on account construction Almshouse.....	209 30	
Disbursed on account new Council Chamber.....	59 25	
Disbursed on account Second Police Station.....	1,700 00	
	<u>16,039 82</u>	
		<u>1,910 82</u>

## CITY CULVERTS.

Appropriation.....	29,012 58	
Do. Sewerage Map — balance 1871 .....	178 79	
Appropriation Bloody Run Gully.	500 00	
	<u>29,691 37</u>	
Disbursed on account culverts, 26,393 14 }		
Do. Sewerage Map.....	3 50 }	27,718 64
Do. Sewerage connections...	1,322 00 }	<u>1,972 73</u>

## CITY HANDS AND CARTS.

Appropriation.....	31,005 75	
Disbursed.....	29,884 55	
	<hr/>	1,121 20

## CHAIN GANG.

Appropriation.....	3,000 00	
Disbursed.....	2,958 46	
	<hr/>	41 54

## CONTINGENT FUND.

Appropriation.....	20,000 00	
Appropriation account City		
Morgue .....	350 00	
Appropriation salt furnished		
the City, 1863.....	10,000 00	
	<hr/>	30,350 00
Disbursed on account salt fur-		
nished City, 1863.....	16,267 40	
Disbursed on account contin-		
gent fund.....	10,015 91	
Disbursed on account Coro-		
ner's inquests.....	1,412 65	
Disbursed on account Lunacy		
Commission.....	125 00	
Disbursed on account catch-		
ing dogs.....	45 00	
Disbursed on account number-		
ing houses.....	305 70	
Disbursed on account of Fines		
and penalties.....	10 00	
Disbursed on account rents...	35 02	
Disbursed on account steam		
roller and crusher.....	408 78	
	<hr/>	28,625 46
	<hr/>	1,724 54

## COURTS AND JURIES.

Appropriation.....	8,000 00	
Disbursed.....	7,873 44	
	<hr/>	126,56

## CITY GAS WORKS.

Appropriation on account of		
expenses.....	139,664 52	
Appropriation on account of		

purifying Gas house building.....	15,000 00	
Appropriation on account of new gas holder.....	4,500 00	
Appropriation on account of new gas holder—balance appropriated 1871.....	19,938 65	
Appropriation construction account.....	18,000 00	
	<hr/>	197,103 17
Disbursed on account of expenses.....	93,051 77	
Disbursed on account coal...	52,950 75	
Disbursed on account purifying gas house building...	18,325 32	
Disbursed on account new gas holder.....	23,308 61	
Disbursed on account construction.....	15,224 38	
	<hr/>	202,860 83
	<hr/>	5,757 66

## CITY WATER WORKS.

Disbursed on account of expenses.....	24,612 22	
Disbursed on account of construction.....	17,808 57	
	<hr/>	42,420 79
Appropriation.....	40,469 63	
	<hr/>	1,951 16

## CITY ALMSHOUSE.

Appropriation.....	35,000 00	
College Infirmary.....	200 00	
Medicines for the poor.....	375 00	
Fuel for the poor.....	3,000 00	
	<hr/>	38,575 00
Disbursed on account poor of the City.....	4,065 45	
Disbursed on account College Dispensary.....	250 00	
Disbursed on account College Infirmary.....	258 00	
Disbursed on account of expenses Almshouse.....	29,040 74	

Disbursed on account medi-		
cines for poor.....	375 00	
Disbursed on account fuel		
for the poor.....	1,218 00	
	<hr/>	35,207 19
		<hr/>
		3,367 81

## CITY ELECTIONS.

Appropriation.....	6,600 00	
Disbursed.....	6,443 28	
	<hr/>	156 72

## CEMETERIES.

Shockoe Hill, appropriation.....	1,300 00	
Disbursed.....	1,238 80	
	<hr/>	6,120 00
St. John's Burying Ground, appropria-		
tion.....	246 12	
Disbursed.....	246 12	
Oakwood Cemetery, appro-		
priation.....	3,250 00	
Oakwood Cemetery, appro-		
priation account repairs...	750 00	
Oakwood Cemetery, appro-	600 00	
priation account Confede-		
rate dead.....	600 00	
	<hr/>	4,600 00
Disbursed account expenses	2,524 79	
Do. Confederate dead.....	324 00	
	<hr/>	2,848 79
		<hr/>
		1,751 21

## EXTENSION CITY WATER WORKS.

Balance appro. for 1871....	51,241 78	
Appropriation for 1872.....	148,758 22	
Appropriation Oregon Hill..	7,229 00	
Appropriation Euker's.....	3,070 00	
	<hr/>	210,299 00
Disbursed on acc't generally,	38,763 80	
Disbursed on account Church		
Hill.....	2,198 57	
Disbursed on account Oregon		
Hill.....	7,217 60	
Disbursed on accouont Eu-		
ker's.....	2,923 20	

Disbursed on account Clay street.....	146 80		
	<u>51,249 97</u>		
			159,049 03
FIRE DEPARTMENT.			
Appropriation.....	36,450 27		
Disbursed.....	36,107 24		
	<u>343 03</u>		
FIRE ALARM AND POLICE TELEGRAPH.			
Appropriation.....	2,352 08		
Disbursed.....	2,198 00		
	<u>154 08</u>		
FIRST VIRGINIA REGIMENT.			
Balance appropriation, 1871,	500 00		
Appropriation for 1872.....	2,000 00		
	<u>2,500 00</u>		
Disbursed.....	2,500 00		
	<u></u>		
JAMES RIVER BRIDGE COMPANY.			
Appropriation.....	80,000 00		
Disbursed.....	55,000 00		
	<u>25,000 00</u>		
JAMES RIVER IMPROVEMENT.			
Balance appropriation, \$250,000 00....	147,140 09		
Disbursed.....	92,279 07		
	<u>54,861 02</u>		
INTEREST ON CITY DEBT.			
Balance unpaid 1st Feb. '72,	11,516 21		
Due 1st July, 1872.....	96,790 08		
Due 1st January, 1873.....	108,726 30		
	<u>217,032 59</u>		
Disbursed.....	206,827 15		
	<u>10,205 44</u>		
PENSIONERS.			
Balance appropriation, 1871.	120 00		
Appropriation, 1872.....	360 00		
	<u>480 00</u>		
Disbursed.....	360 00		
	<u>120 00</u>		
PAY OF MAGISTRATES.			
Appropriation.....	800 00		
Disbursed.....	800 00		
	<u></u>		

## REVISION OF CITY ORDINANCES.

Appropriation .....	1,000 00	
	<hr/>	1,000 00

## SALARY OF OFFICERS.

Appropriation .....	22,050 00	
Disbursed .....	22,279 48	
	<hr/>	229 48

## STATIONERY AND PRINTING.

Appropriation .....	4,605 69	
Disbursed .....	4,333 10	
	<hr/>	272 59

## STEAM ROLLER AND CRUSHER.

Appropriation .....	9,906 90	
Disbursed .....	9,655 95	
	<hr/>	250 95

## STREETS GENERALLY.

Appropriation .....	67,000 00	
Disbursed on account bridge over Bacon's Quarter Branch .....	884 61	
Disbursed on account bridge foot 9th street .....	831 65	
Disbursed on account flag- ging .....	979 90	
Disbursed on account gra- ding Ashland street .....	831 64	
Disbursed on account Nichol- son street .....	1,305 75	
Disbursed on account 26th street .....	1,238 68	
Disbursed on account letter- ing street lamps .....	116 04	
Disbursed on account paving sidewalks .....	1,371 26	
Disbursed on account paving 20th street .....	2,629 01	
Disbursed on acc't re-grading Cary street .....	2,529 25	
Disbursed on acc't re-grading Main street .....	2,334 32	
Disbursed on account remo- ving earth, &c .....	222 55	

Disbursed on account repairs to streets.....	8,880 33	
Disbursed on account street contingent fund.....	5,784 46	
Disbursed on account streets in Jefferson Ward.....	6,560 70	
Disbursed on account streets in Clay Ward.....	12,128 46	
Disbursed on account streets in Marshall Ward.....	1,951 65	
Disbursed on account streets in Monroe Ward.....	2,883 73	
Disbursed on account streets in Madison Ward.....	3,424 65	
Disbursed on account streets in Jackson Ward.....	5,503 21	
Disbursed on account widening Baker street.....	100 00	
	<hr/> 62,491 85	
	<hr/>	4,508 15

## TAXES REFUNDED.

Appropriation.....	1,319 27	
Disbursed .....	1,220 57	
	<hr/>	98 70
		<hr/>
		\$299,997 40
		<hr/> \$8,865 07

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

G.

*Bonded Debt of the City of Richmond, 1st January, 1873.*

## SIX PER CENT. REGISTERED BONDS.

Outstanding 1st February, 1872..... \$2,564,785 97

Issued on account of—

Past due bonds, funded, twenty per cent.

added..... 720 00

Coupon bonds, funded..... 46,000 00

Registered bonds, consolidated..... 14,725 00

Hypothecated bonds..... 75,700 00

Chairman Finance Committee—sold.... 129,900 00

Chesapeake and Ohio Railroad Co..... 233,700 00

Stuart, Buchanan &amp; Co..... 10,000 00

510,745 00

Less..... 3,075,530 97

Redeemed by warrants on Treasurer.... 12,302 50

do. by funding, 20 per cent. added, 600 00

do. by funding into coupons..... 22,000 00

do. in settlement with Stuart, Buchanan &amp; Co..... 1,000 00

Redeemed by consolidation..... 14,725 00

do. by hypothecated bonds returned..... 40,000 00

90,627 50

Total outstanding, 1st February, 1873..... \$2,984,903 47

## SIX PER CENT. COUPON BONDS.

Outstanding 1st February, 1872..... 167,000 00

Issued on account of—

Chairman Finance Committee—sold.... 14,000 00

Hypothecated bonds..... 107,000 00

Registered bonds, funded..... 22,000 00

143,000 00

Less..... 310,000 00

Redeemed by funding into Registered

bonds..... 46,000 00

Redeemed by hypothecated bonds re-

turned..... 107,000 00

153,000 00

Total outstanding 1st February, 1873..... 157,000 00

EIGHT PER CENT. REGISTERED BONDS.

Outstanding 1st February, 1872..... 53,000 00

Issued on account of Board of Educa-

tion..... 8,200 00

Issued on account of James river im-

provement..... 18,400 00

26,600 00

Total outstanding 1st February, 1873..... 79,600 00

EIGHT PER CENT. COUPON BONDS.

Outstanding 1st February, 1872 and 1873..... 197,000 00

Total Bonded Debt, morning 1st February, 1873..... \$3,418,503 47

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.

## H.

*Maturity of the City Debt.*


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Due 1st January, 1860.....	\$1,000 00
1st July, 1862.....	500 00
1st January, 1864.....	9,333 00
1st do. 1866.....	4,400 00
1st December, 1867.....	2,930 00
1st January, 1868.....	2,900 00
1st May, 1869.....	4,550 00
1st January, 1870.....	7,600 00
1st July, 1870.....	66,307 50
1st July, 1874.....	5,000 00
1st July, 1875.....	40,887 50
1st July, 1876.....	12,650 00
1st July, 1877.....	44,450 00
1st July, 1879.....	1,850 00
1st July, 1880.....	65,202 28
1st August, 1880.....	39,250 00
1st January, 1881.....	189,463 92
1st July, 1881.....	21,697 50
1st July, 1882.....	50,100 00
1st July, 1883.....	50,000 00
1st January, 1884.....	14,500 00
1st July, 1884.....	48,662 00
1st January, 1885.....	450 00
1st July, 1885.....	104,562 50
1st July, 1886.....	48,000 00
1st January, 1887.....	600 00
1st July, 1887.....	296,050 00
1st January, 1888.....	3,101 50
1st July, 1888.....	203,799 00
1st January, 1889.....	238,068 55
1st July, 1889.....	4,500 00
1st January, 1890.....	17,300 00
1st July, 1890.....	49,600 00

1st July, 1891.....	55,300 00
19th March, 1893.....	9,800 00
1st January, 1893.....	21,433 00
1st July, 1893.....	400 00
1st January, 1899.....	200 00
1st January, 1900.....	2,800 00
1st January, 1904.....	603,485 00
1st July, 1904.....	8,200 00
1st January, 1905.....	15,000 00
1st July, 1905.....	172,490 22
1st January, 1906.....	407,700 00
1st January, 1907.....	21,130 00
1st July, 1907.....	17,700 00

---

Total six per cent. Registered bonds..... \$2,984,903 47

1st January, 1904.....	9,000 00
1st July, 1904.....	92,000 00
1st January, 1905.....	50,000 00
1st January, 1906.....	4,000 00
1st July, 1906.....	2,000 00

---

Total six per cent. coupon bonds..... \$157,000 00

1st July, 1904.....	97,000 00
1st October, 1904.....	100,000 00

---

Total eight per cent. coupon bonds..... \$197,000

1st July, 1904.....	66,100 00
1st July, 1905.....	3,000 00
1st January, 1906.....	600 00
1st July, 1906.....	800 00
1st January, 1907.....	9,100 00

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Total eight per cent. Registered bonds..... \$79,600

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Total Bonded Debt..... \$3,418,503

J. B. ROYSTER, *Auditor.*

FEBRUARY 24TH, 1873.



**A**NNUAL **R**EPORT

OF THE

**Treasurer of the City of Richmond,**

FOR THE

*Year ending January 31st, 1873.*



# ANNUAL REPORT

*Statement of Receipts and Disbursements by the Treasurer  
of the City of Richmond, for the fiscal year ending Jan-  
uary 31st, 1873.*

	BILLS PAYABLE.	RECEIPTS.	DISBURSE- MENTS.
Bills receivable.....		\$1,850 90	
Bills payable.....		590,026 24	
Board of Education.....		8,170 00	
City grounds and buildings.....		17 30	
City culverts.....		340 93	
City hands and carts.....		107 67	
Committee on reduction of city debt..		2,812 67	
Cleaning streets and removing garbage.		142 75	
Chesapeake and O. R. R. Co.....		2,706 00	
Chairman Finance Committee.....		128,624 11	
Construction Gas Works.....		865 52	
Construction Water Works.....		1,998 55	
City seal.....		22 00	
Discount and interest on bonds sold...		37 63	
Expenses and receipts Gas Works....		160,796 84	
Do. Almshouse.....		683 50	
Do. First Market.....		9,515 36	
Do. Second Market.....		7,735 57	
Do. Seabrook's warehouse.....		5,218 75	
Do. Oakwood Cemetery.....		1,628 82	
Do. Shockoe Hill Cemetery.....		592 75	
Fire Department.....		143 75	
Fines and penalties.....		3,480 33	
Interest on city debt.....		31 68	
James River Improvement.....		19,946 17	
License tax of 1871.....		10 00	

Police contingent fund.....		300 00
Redemption of city lots.....		1,501 04
Rents.....		744 66
Regnault, John F., City Collector.....	496,329 59	
Tax on billiard tables.....	262 50	
Do. Hawkers and peddlars.....	127 75	
Do. Shows, &c.....	549 75	
Do. Goats.....	236 75	
Do. Dogs.....	6,678 50	
Do. Wagons, &c.....	7,545 75	
Do. Hacks and carriages.....	1,143 75	
Sample license.....	170 00	
Tax on insurance companies.....	3,992 07	
Tax on hauling cars.....	608 00	
Water rents.....	53,963 73	
Bills payable.....		570,487 70
Board of Health.....		1,104 25
Board of Education.....	2,843 59	63,334 13
Bridge over Bacon's Quarter Branch.....		884 61
Bridge foot of 9th street.....	612 35	219 30
Coal for Gas Works.....	23,146 47	29,804 28
City Police.....		81,951 94
City grounds and buildings.....	31 70	7,072 76
City Hospital.....		3,622 52
City culverts.....	16,120 24	10,272 90
City hands and carts.....	4,208 82	25,675 73
City Attorney.....		2,000 00
Chain Gang.....		2,958 46
Contingent fund.....	2,000 00	8,015 91
Coroner's inquests.....		1,412 65
Construction Gas Works.....	1,154 43	14,069 95
Do. Water Works.....	4,607 20	13,201 37
Do. Almshouse.....		209 30
College Dispensary.....		250 00
College Infirmary.....		258 00
Confederate dead, Oakwood Cemetery,..		324 00
Courts and juries.....	2,482 50	5,390 94
Catching dogs.....		45 00
Discount and interest.....	2,863 00	12,813 26
Expenses Gas Works.....	2,317 82	90,733 95
Do. Water Works.....	803 87	23,808 35
Do. Almshouse.....	3,486 93	25,553 81
Do. City elections.....		6,443 28
Do. First Market.....		3,194 55

Expenses Second Market.....		2,165 85
Do. Seabrook's warehouse.....	370 94	247 50
Do. Oakwood Cemetery.....		2,524 79
Do. Shockoe Hill Cemetery.....		1,238 80
Enlargement Second Police Station....	500 00	1,200 00
Extension City Water Works.....	36,514 71	14,735 26
Friends' Colored Orphan Asylum.....		1,000 00
Fire Department.....	1,783 42	34,323 82
Fire Alarm and Police Telegraph.....		2,198 00
Fines and penalties.....		10 00
Fuel for the poor.....		1,218 00
Female Humane Association.....		1,000 00
Fuel for public buildings.....	832 00	85 97
Flagging.....	341 50	638 40
First Virginia Regiment.....	2,000 00	500 00
Grading Nicholson street.....	254 18	1,051 57
Grading 26th street.....	53 58	1,185 10
Grading Ashland street.....		831 64
Interest on city debt.....		201,178 83
James' River Improvement.....	4,803 19	87,475 88
Improvement Monroe Square.....		70 00
Jamas River Bridge Company.....		55,000 00
Lunacy Commissions.....		125 00
Lettering street lamps.....		116 04
Medicine for the poor.....		375 00
New gas holder.....	6,953 00	16,355 61
New Council Chamber.....		59 25
Numbering houses.....		305 70
Pensions.....		360 00
Purifying House, Gas Works.....	13,226 32	5,099 00
Poor of the city.....	911 42	3,154 03
Police contingent fund.....		599 48
Pay of Magistrates.....		800 00
Paving sidewalks and alleys.....	19 94	1,351 32
Paving 20th street.....		2,629 01
Removing earth from foundations.....		222 55
Repairs of streets.....	2,027 84	6,852 49
Rents.....		35 02
Richmond Male Orphan Asylum.....		1,000 00
Re-grading Main street.....	245 26	89 06
Re-grading Cary street.....	2,500 00	2,029 25
Six per cent. Registered Bonds.....		12,302 50
St. Joseph's Asylum.....		1,000 00
St. John's Burying Ground.....		246 12

Salary of officers.....		20,279 48
Street contingent fund.....		5,784 46
Streets Jefferson Ward.....	3,268 44	3,292 26
Streets Clay Ward.....	7,886 70	4,241 76
Streets Marshall Ward.....	820 86	1,130 79
Streets Monroe Ward.....	774 86	2,108 87
Streets Madison Ward.....	1,656 38	1,768 27
Streets Jackson Ward.....	2,934 05	2,569 16
Stationery and printing.....		4,333 10
Sewerage map.....		3 50
Salt furnished the city, Stewart, Buchanan & Co., 1863.....		6,267 40
St. Paul's Church Home.....		500 00
Steam roller and crusher.....	408 78	9,247 17
Sewer connections.....	475 10	846 90
Taxes refunded.....		1,220 57
Widening Baker street.....		100 00
<hr/>		
Total amounts of receipts and disbursements, cash, for fiscal year...	\$1,521,659 63	\$1,533,792 43
Amount of bills settled by bills payable for the year.....	\$158,241 39	\$158,241 39
<hr/>		
Total of cash and bills payable for the fiscal year.....	\$1,679,901 02	\$1,692,033 82
Balance of cash, from January 31st, 1872, and to February 1st, 1873.....	\$23,760 16	\$11,627 36
<hr/>		
	\$1,703,661 18	\$1,703,661 18

S. C. GREENHOW,  
*Treasurer City of Richmond.*

FEBRUARY, 20TH, 1873.

ANNUAL REPORT

OF THE

Engineer's Department

OF THE

CITY OF RICHMOND,

FOR THE

*Fiscal Year ending January 31st, 1873.*



# ANNUAL REPORT.

---

OFFICE OF CITY ENGINEER,  
*Richmond, Va., Feb. 13th, 1873.*

*To the Chairman and Members*

*of the Committee on Streets Generally:*

GENTLEMEN—I have the honor to submit the following statements of amounts expended and work executed in this department during the fiscal year, 1873.

Very respectfully,

CHARLES H. DIMMOCK,  
*City Engineer.*

## STATEMENT No. I.

*The following exhibit presents the amounts expended through this office, for the repairs and improvements of streets, during the fiscal year ending January 31st, 1873:*

## HANDS AND CARTS.

Shop account, repairs, &c.....	\$223 33	
Cash paid to hands.....	16,311 69	
Feed and provender for mules, &c.....	6,546 08	
General account (incidental expenses).....	1,545 91	
Amounts paid stable and district managers for services.....	3,000 00	
Amounts paid blacksmith and striker.....	1,254 66	
Blacksmith's shop, for iron, tools, &c.....	352 76	
		<hr/>
Total cost for hands and carts for the year.....		\$29,234 43

## EXPENDITURES ON STREETS, PER GENERAL COMMITTEE.

Stone for McAdamizing, sand, &c.....	4,399 12	
Streets in Marshall Ward, sundry orders :		
New work.....	308 54	
Old work, incidental to above.....	29 05	
	<hr/>	\$337 59
Streets in Jefferson Ward, sundry orders :		
New work.....	916 02	
Old work, incidental to above.....	535 43	
	<hr/>	\$1,451 45
Streets in Madison Ward, sundry orders :		
New work.....	281 68	
Old work, incidental to above.....	27 67	
	<hr/>	\$309 35
Streets in Monroe Ward, sundry orders :		
New work.....	879 63	
Old work, incidental to above.....	126 49	
	<hr/>	\$1,006 12

## Streets in Clay Ward, sundry orders :

New work.....	1,754 90	
Old work, incidental to above.....	41 34	
	<hr/>	\$1,796 24

## Streets in Jackson Ward, sundry orders :

New work.....	855 32	
Old work, incidental to above.....	12 11	
	<hr/>	\$867 43

Street contingent fund, salaries, stationery, &c.....	4,960 29	
	<hr/>	\$15,127 59

## EXPENDITURES ON STREETS, PER ORDER OF COUNCIL.

Streets in Marshall Ward, sundry orders.....	\$4,377 46	
do. Jefferson Ward, do. ....	6,328 14	
do. Madison Ward, do. ....	1,248 10	
do. Monroe Ward, do. ....	5,444 44	
do. Clay Ward, do. ....	12,615 23	
do. Jackson Ward, do. ....	5,880 70	
	<hr/>	\$35,894 07

## GENERAL EXPENDITURES.

Streets in Marshall Ward, repairs, &c.....	\$112 86	
do. Jefferson Ward, do. ....	1,677 22	
do. Madison Ward, do. ....	2,085 82	
do. Monroe Ward, do. ....	1,242 54	
do. Clay Ward, do. ....	242 22	
do. Jackson Ward, do. ....	424 59	
	<hr/>	\$5,785 25

## SPECIAL EXPENDITURES.

Repairs to city pumps.....	24 50
Earth from foundations.....	222 55
Numbering houses.....	305 70
Lettering streets on street lamps.....	366 04
Sewerage map.....	3 50
Flagstones, chargeable to owners.....	312 69
Paving across sidewalks and paving of alleys, chargeable to owners.....	976 61
Grading of alleys, chargeable to owners.....	86 00
Sewer connections, chargeable to property owners....	1,422 58
Building bridge over Bacon's Quarter Branch, leading to Cedarwood Cemetery.....	881 61
Bridge foot of 8th street.....	125 00

Bridge foot of 9th street, across Haxall's mill-race...	831 65	
Building bridge over Shockoe Creek, 14th and Wash- ington streets.....	75 00	
Repairs of bridges.....	155 50	
Chain Gang.....	206 21	
Catching dogs.....	131 05	
Premium for planting trees in city.....	16 00	
Transcribing city map.....	111 75	
Purchase of ground to widen Baker street, from 2d to 3d street.....	102 35	
Brick walk from gate way on Broad street to St. John's church.....	96 12	
Purchase of steam road-roller and crusher.....	7,269 60	
Steam road-roller and crusher (expense account).....	2,527 15	
Culverts.....	26,230 31	
	<hr/>	42,482 47
Total amount expended during fiscal year.....		\$128,523 81
Total amount expended for hands and carts.....	\$29,234 43	
Total amount expended for culverts.....	26,230 31	
Total amount expended for street im- provements, &c.....	73,059 07	
	<hr/>	\$128,523 81

### UNEXPENDED APPROPRIATIONS FOR UNFINISHED WORK, &c., FEBRUARY 1ST, 1873.

Hands and carts.....	\$1,771 32
Culverts.....	3,282 27
Re-grading, curbing, &c., Main street, from Adams to Monroe street.....	174 18
Grading 26th street from Clay to N street, and gravel- ing M street from 26th to 27th street.....	1,186 52
Transcribing city map.....	38 25
Steam road-roller and crusher.....	600 97
	<hr/>
Amount of unexpended appropriations.....	\$7,053 51
Received during fiscal year for sales of garbage, street sweepings, &c.....	142 75
Received on account of hands and carts, for sales of old shovels, disabled mule, and amount deducted from hands for lost shovels, &c.....	123 67
	<hr/>
	\$266 42

## STATEMENT No. II.

*Lineal feet of Grading, Graveling, Granite Gutters, Brick Side-Walks, Curb Stones, Flagging, Street Paving, McAdamizing and Sewers, laid down during the fiscal year 1872.*

LOCATION.	Grading.	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdamizing.	Sewers.
MARSHALL WARD.									
Clay street, north side, bet. 28th & 29th, and east side 28th, bet. Clay and Leigh.....	.....	.....	642						
Seventh street, south side, crossing Louisiana street, Rocketts.....	.....	.....	50						
Elm street, west side, bet. Poplar and Rocketts.....	.....	.....	230						
Clay street, south side, bet. 28th & 29th, and east side 28th, between Marshall and Clay.....	.....	.....	642						
M street, between 26th and 27th streets.....	350	350							
M street, between 25th and 26th streets.....		350							
26th street, bet. Marshall and M..	1450	1450							
Nicholson street, bet. Rocketts st. and Williamsburg Avenue.....	1750								
Denny street, bet. 5th street and Williamsburg Avenue.....	800	Partial.							
Williamsburg Avenue, bet. Louisiana street and Gillies' creek..	1600	Partial.							
27th street, bet. Leigh and M.....	350								
Bloody Run Ravine, across Broad street.....	.....	.....	.....	.....	.....	.....	.....	.....	186
26th street, west side, bet. Broad and Marshall.....	.....	.....	.....	350					
28th street, east side, bet. Broad and Leigh.....	.....	.....	.....	1065	.....	Partial.			
Total.....	6300	2150	1564	1415					186

LOCATION.	Grading	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdam-izing.	Sewers.
JEFFERSON WARD.									
Alley, bet. Broad and Grace and 23d and 24th.....	.....	.....	.....	.....	.....	.....	288		
Alley, bet. Main and Cary and 20th and 21st.....	.....	.....	.....	.....	.....	.....	120		
19th street, west side, bet. Broad and Marshall.....	.....	.....	350						
20th street, bet. Main and Dock streets.....	.....	.....	.....	.....	.....	.....	452		
20th street, west side, bet. Main and Dock.....	.....	.....	.....	452					
Venable street, south side, between Mosby and Pickett streets.....	380	....	380						
23d street, east and west sides, bet. Broad and Marshall.....	350	....	700	160					
24th st., east and west sides, bet. Main and Cary sts., and Cary st., north side, bet. 24th & 25th sts..	.....	.....	784	....	652				
Ravine, north of Marshall, across 24th street.....	.....	.....	.....	.....	.....	.....	.....	.....	186
Alley, bet. Main and Franklin and 21st and 22d.....	.....	.....	.....	.....	.....	.....	284		
Exchange Alley, between 13th and 14th.....	.....	.....	.....	.....	.....	.....	250		
20th street, between Franklin and Broad.....	717	....	500						
22d street, between Broad and Marshall.....	165								
Alley, bet. Broad and Marshall and 22d and 23d.....	280								
20th street, east side, bet. Main and Cary.....	.....	.....	.....	166					
24th street, bet. M and N, west side.....	.....	.....	.....	106					
19th street, west side, bet. Cary and Dock.....	.....	.....	.....	113					
23d street, west side, bet. Broad and Grace.....	.....	.....	.....	350					
17th street, east side, bet. Cary and Dock.....	.....	.....	.....	155					
Ross street, east side, from half-way, bet. 13th and 14th to 14th street, and west side 14th, bet. Franklin and Ross.....	.....	.....	.....	469					
Marshall street, south side, crossing College street.....	.....	.....	.....	.....	.....	12			
21st street, east side, crossing Franklin.....	.....	.....	.....	.....	.....	41			
22d street, west side, crossing Broad.....	.....	.....	.....	.....	.....	42			
23d street, west side, crossing Grace.....	.....	.....	.....	.....	.....	42			
18th street, east side, crossing Venable.....	.....	.....	.....	.....	.....	34			

LOCATION.	Grading.	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdam-izing.	Sewers.
JEFFERSON WARD—Continued.									
19th street, bet. Broad and Main streets.....	.....	.....	.....	.....	.....	.....	.....	1120	
20th street, bet. Broad and Main streets.....	.....	.....	.....	.....	.....	.....	.....	1120	
Grace street, bet. 19th and 20th streets.....	.....	.....	.....	.....	.....	.....	.....	284	
19th street, between Franklin and Grace.....	.....	.....	.....	.....	.....	.....	.....	.....	350
Virginia street and Exchange Alley.....	.....	.....	.....	.....	.....	.....	.....	.....	150
Broad street, bet. 22d and 24th sts.	.....	.....	.....	.....	.....	.....	.....	.....	650
Franklin st., from half-way bet. 19th and 20th streets, to 20th, & 20th, bet. Franklin and Grace..	.....	.....	.....	.....	.....	.....	.....	.....	510
Total.....	1892	.....	2714	1971	652	171	1394	2524	1846
MADISON WARD.									
11th, bet. Main and Cary.....	.....	.....	.....	.....	.....	.....	160		
9th st., east side, from alley south of Main to Cary street.....	.....	.....	.....	165					
9th street, west side, bet. Boshers' alley and Cary street.....	.....	.....	.....	165					
12th street, west side, crossing Clay	.....	.....	.....	.....		41			
12th street, north of Clay, opposite Normal School.....	.....	.....	.....	.....		20½			
6th street, bet. Marshall & Clay..	.....	.....	.....	.....		42			
Grace, bet. 5th and 6th streets....	.....	.....	.....	.....				292	
Grace, bet. 6th and 9th streets....	.....	.....	.....	.....				845	
Ravine, north of Clay, bet. 10th & 11th streets.....	.....	.....	.....	.....					158
6th st., bet. Broad and Main.....	.....	.....	.....	.....				1043	
7th st., bet. Broad and Main.....	.....	.....	.....	.....				1034	
8th st., from half-way bet. Broad and Grace to Main.....	.....	.....	.....	.....					930
Total.....	.....	.....	.....	370	.....	103½	160	3214	1088



LOCATION.	Grading	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdam-izing.	Sewers.
CLAY WARD—Continued.									
Ashland street, bet. Reservoir st. and corporate limits.....	980								
Broad st., from Baptist College to corporate limits.....	800								
Cherry street, bet. Park Avenue and Main street.....	750								
Madison street, bet. Franklin and Main.....	350								
Cary street, between Morris and Harvie.....	800								
Main street, between Laurel and Reservoir.....	1050								
Main street, between Belvidere & Cherry.....	1100								
Laurel street, between Main and Canal.....	880								
Canal st., bet. Cherry and Pine..	650								
Linden street, bet. Park Avenue and Main.....	900								
Floyd st., bet. Linden and Laurel..	700								
Park Avenue, bet. Laurel and Linden, south side, walkway.....	800								
Main street, south side, bet. Belvidere and Morris .....				1980					
Jefferson street, east side, between Franklin and Grace.....				350					
Leigh street, south side, between Brook Avenue and Smith st....				274					
Main street, south side, crossing Pine, Laurel, Cherry, Linden and Reservoir streets.....						230			
Clay street, at intersection of Smith, Munford, Gilmer and Graham, and across the sts. on the north side of Clay, bet. Graham and Harrison.....						189			
Franklin street, north and south sides, crossing Monroe street....						60			
Franklin street, south side, crossing Henry street .....						21			
Catherine street, south side, crossing Henry street .....						26			
Pine street, west side, in front of Baptist Church.....					110	34			
Adams street, from Main to alley bet. Main and Franklin streets..									186
Grace, bet. Monroe and Laurel...									1280
Main, bet. Monroe and Belvidere.									400
Laurel, bet. Franklin street and Park Avenue.....									360
Total.....	11715	5955	5817	5785	3793	667			2226

LOCATION.	Grading.	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdam-izing.	Sewers.
JACKSON WARD.									
Baker street, north side, bet. St. John and St. Peter streets.....	.....	.....	643	312					
St. James, west side, bet. Jackson and Duval streets.....	.....	.....	350						
St. James, west side, bet. Baker and Charity streets.....	.....	.....	304						
Baldwin street, north side, bet. 17th and Concord streets.....	.....	.....	175						
Cedar st., north and south sides, bet. 17th and Buchanan streets.	340	....	680						
Washington, st., north and south sides, bet. 17th and Buchanan..	340	....	680						
Buchanan street, between Jay and Washington.....	750								
Federal street, bet. 1st and 2d....	300								
Judah st., bet. Leigh and Duval..	350								
15th street, bet. Brown and Washington.....	960								
Baldwin st., bet. 17th & Buchanan	340								
Baker street, north side, bet. 5th and 6th.....	.....	.....	.....	350					
Marshall street, north side, bet. 15th and Jail Alley.....	.....	.....	.....	300					
Duval st., north side, bet. 4th and 5th.....	.....	.....	.....	255					
Baker street, north side, bet. 2d and 3d.....	.....	.....	.....	284					
3d street, west side, bet. Jackson and Duval.....	.....	.....	.....	555					
Venable street, north side, near 17th street.....	.....	.....	.....	130					
3d street, west side, bet. Duval and Bates street.....	.....	.....	.....	696					
Price street, east side, bet. Jackson and Duval.....	.....	.....	.....	181					
17th street, east side, from Richard street, to a point opposite C. and O. workshops.....	.....	.....	.....	800					
Duval street, south side, bet. 5th and 6th.....	.....	.....	.....	50					
17th street, west side, bet. Baldwin and Lownes.....	.....	.....	.....	.....	384				
St. James and Duval streets.....	.....	.....	.....	.....	.....	31			
Marshall street, south side, crossing College.....	.....	.....	.....	.....	.....	11			
3d street, west side, crossing Jackson.....	.....	.....	.....	.....	.....	21			
3d st., west side, crossing Duval..	.....	.....	.....	.....	.....	28			
Baker street, crossing 3d.....	.....	.....	.....	.....	.....	41			
12th street, north of Clay street, opposite Normal school.....	.....	.....	.....	.....	.....	20½			
St. John street, west side, crossing Baker.....	.....	.....	.....	.....	.....	31			

LOCATION.	Grading.	Gravel'g	Granite Gutters.	Brick Sidewalks	Curb Stones.	Flagging	Street Paving.	McAdam-izing.	Sewers.
JACKSON WARD—Continued.									
17th street, bet. Marshall and Clay, opposite No. 413 .....	.....	.....	.....	.....	.....	41			
Across 17th street, at Brown, Jay, and Washington streets .....	.....	.....	.....	.....	.....	123			
Total .....	3380	.....	2822	3913	384	347½			

## SUMMARY.

WARDS.	Grading.	Graveling.	Granite Gutters.	Brick Side-walks.	Curb Stones.	Flagging.	St. Paving.	McAdamiz'g	Sewers.
Marshall Ward	6300	2150	1564	1415	.....	.....	.....	.....	186
Jefferson Ward	1892	.....	2714	1971	652	171	1394	2524	1846
Madison Ward.	.....	.....	.....	370	.....	103½	160	3214	1088
Monroe Ward..	1300	.....	1246	2191	340	41	.....	2611	2574
Clay Ward....	11715	5955	5817	5785	3793	667	.....	.....	2226
Jackson Ward.	3380	.....	2822	3913	384	347½			
Grand Total...	24587	8105	14163	15645	5169	1330	1554	8349	7920

## STATEMENT No. III.

WARDS.	Miles of Streets Paved with Granite.	Miles of Streets Paved with Cobble Stone.	Miles of Streets McAda- mized.	Miles of Streets. Gravel'd	Miles of Streets Graded.	Miles of Streets not Graded.	Total No. of Miles of Sts.
Marshall.....	.60	.65	.....	3.70	4.95	16.81	21.76
Jefferson.....	1.69	3.41	.58	4.63	10.31	4.60	14.91
Madison .....	.92	1.79	1.35	6.65	10.71	1.30	12.01
Monroe .....	.....	.71	.68	7.47	8.86	1.90	10.76
Clay .....	.....	.....	.06	3.97	4.03	19.61	23.64
Jackson.....	.....	.....	.12	3.40	3.52	16.65	20.17
Total.....	3.21	6.56	2.79	29.82	42.38	60.87	103.25

STATEMENT No. IV.

*Sewers built in the City of Richmond to February, 1873.*

25

LINEAL FEET DRAIN PIPE.		LINEAL FEET BRICK SEWERS.				LINEAL FEET STONE SEWERS.			
12 inch Diam.	15 inch Diam.	1 ft.x2 ft.	2 ft.x3 ft.	3 ft.x4 ft.	3 ft.x5 ft.	1 ft.x2 ft.	2 ft.x3 ft.	3 ft.x4 ft.	3 ft.x5 ft.
809	1300	5654	13955	4310	1800	2467	9951	6145	5833
Total,		Total,				Total,			
2,109 ft.=0.40 miles.		25,719 ft.=4.87 miles.				24,396 ft.=4.64 miles.			

SUMMARY :

52,224 ft.=9.89 miles.

Of the above, 7,920 ft.=1.50 miles were built during the fiscal year 1872.



ANNUAL REPORT

OF THE

SUPERINTENDENT

OF

Public Grounds and Buildings,

FOR THE

Fiscal Year ending January 31st, 1873.



# REPORT.

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OFFICE OF CITY ENGINEER,  
*Richmond, Va., Feb. 13th, 1873.*

*To the Chairman and Members  
of the Committee on Public Grounds and Buildings:*

GENTLEMEN—I beg leave herewith to present the Annual Report of the amounts expended through this office, on account of Public Grounds and Buildings, during the fiscal year ending January 31st, 1873.

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## SPECIAL ACCOUNTS.

Fuel for public buildings.....	927 67	
Building shed at First Market House.....	450 00	
Enlargement of Second Police Station House.....	1,700 00	
	<hr/>	\$3,077 67

## GENERAL ACCOUNTS.

Public grounds and buildings.....	\$3,689 46	
City Hall and offices, repairs, &c.....	1,455 07	
Washington Hall, repairs, &c.....	121 90	
City Jail, repairs, &c.....	636 78	
Office of Chief of Police.....	14 00	
First Police Station.....	22 50	
Temporary Second Police station, (Fifth and Marshall streets).....	17 50	
Third Police Station.....	80 19	
First Market House.....	10 00	
Second Market House.....	3 00	
Monroe Square, pay of watchman, implements, &c.	684 65	
City stable, pay of watchman, &c.....	593 57	
Engine House, Church Hill, 25th street, lightning rods, &c.....	35 25	

Engine House, 3d, between Broad and Grace, Com- pany B.....	7 05	
City Spring lot.....	3 00	
Hack hire, for Committee to visit Chimborazo, Mar- shall Square, &c.....	5 00	
	<hr/>	\$3,689 46
Total expenditures during fiscal year.....		<hr/> \$6,767 13
Amounts received from rents, &c., during the fiscal year 1872, and paid to Treasurer of City of Rich- mond, rents of public grounds and buildings, &c.	761 96	
Unexpended appropriations, (unfinished work,) en- largement of Second Police Station House.....	\$3,300 00	

In explanation of the seeming conflict between the amount reported by the Auditor, as expended upon public grounds and buildings, and that by your Superintendent, I deem it proper to state that improvements have been made and work done, by order of the Council and through the Chairman of your Committee, and not under the direction of the Superintendent; their cost does not appear on the books in this office.

Respectfully,

CHAS. H. DIMMOCK,

*Sup't. Public Grounds and Buildings.*





ANNUAL REPORT

OF THE

WATERING COMMITTEE

OF THE

*CITY OF RICHMOND,*

WITH

*ACCOMPANYING DOCUMENTS,*

February 1st, 1873.

---

WATERING COMMITTEE.

*GEORGE BARGAMIN, Chairman.*

*M. L. STRAUS,*

*Dr. W. H. SCOTT,*

*C. B. LIPSCOMB,*

*WILLIAM ENGLISH.*

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# REPORT.

---

*To the President and Members of the City Council :*

GENTLEMEN—The Watering Committee respectfully present this, their Annual Report, and the report of the Superintendent, for the year ending February 1st, 1873. A summary of which is as follows :

Cost of making 208 new attachments for water takers,	\$3,744 00	
Cost of altering seventeen, by new attachments....	306 00	
do. Extension of main pipes.....	21,223 39	
do. Enlarging the works to date.....	41,245 03	
do. Incidental expenses.....	28,259 60	
	<hr/>	\$94,778 02
Received for water rents.....	\$53,963 73	
State of Virginia, (Penitentiary).....	1,743 50	
City of Richmond, (City Jail).....	255 05	
	<hr/>	\$55,962 28
Excess of disbursements.....		\$38,815 74

The works are in most excellent condition, considering the increase of labor they have to perform. Although the number of water takers have very largely increased, and the use of water still further increased by additional fixtures where parties are already supplied, yet the working hours of the machinery have not increased in proportion to the consumption. This may be attributed, to a great extent, to the constant attention of the officers and men managing this portion of the department.

The work of connecting the 24-inch pipe with the Reservoir, was done in July last, on the syphon plan, and works well, and costs far less than running the pipe through the base of the embankment, which would have been attended

with very great trouble, besides a very hazardous undertaking, with the Reservoir full of water.

During the year about two miles of street mains have been laid. The most of which were laid in the western and north-western parts of the city. Applications are being made for extensions in other portions. The work of laying the main in Cary street has been commenced, and but for the bad weather would have progressed much further. It has been laid from 22d street to Shockoe Creek, and all the cross connections made. The balance of the pipes for this work are now being made very rapidly, and no delay will be experienced on this account. Being now in the narrow and most business portion of Cary street, progress will be slow. It is hoped, however, that this work will be completed by the 1st of May.

The erection of the new pumps and the necessary building, is now being pushed forward as rapidly as the nature of the work will admit. It is a work of considerable magnitude, and will require many months to complete it. It is hoped, however, that this work may be brought into use by the latter part of the summer.

The supply of the present Reservoir is becoming inadequate, in case the pumps are stopped—as is sometimes the case—the supply is exhausted in about three days. In order to effect a more perfect supply to the lower parts of the city, the present Reservoir is intended to be used only for this purpose, and a new one which is proposed to be erected very soon alongside, will be twenty feet higher, for the supply of the more elevated parts of the city.

The new line of pipes now being laid in Cary street, will be connected with the two old (10x12-inch) at Madison and Cary streets, which will be used exclusively for the lower portions of the city; and the 24-inch laid in 1861, will supply the high parts of the city, by dividing the lower from the

upper level, a more uniform and constant supply will be maintained, and in case of fire, one will not be affected by the other.

The new pumps, the most important portion of the new improvements, have been commenced. Messrs. Talbott & Sons contracting for the pumps, and Messrs. Joseph Hall & Co. for the gearing. The plan of these pumps is similar to those lately built at Fairmount, Philadelphia. In order to have them properly proportioned, and at the same time to combine all the modern improvements with Turbine Water Wheel, in such machinery, Mr. E. Geyelin, a practical hydraulic engineer of long experience, was employed to furnish plans and specifications and superintend their erection. The necessary stone will be gotten from the quarry recently purchased from Mr. Alois Rick, just above Hollywood Cemetery. This addition to the present machinery, will be built to the western end of the present house, and form a part of it when finished. The work is in course of construction, and it is hoped that it may be brought into use by the latter part of the coming summer.

In closing this, our annual report, we have again to express our earnest commendation to the faithful and efficient manner which the officers and employees of the works have performed the several duties assigned them.

All of which is respectfully submitted.

GEO. BARGAMIN,

*Chairman.*

## Superintendent's Report.

---

*To the Chairman and Members of the Watering Committee :*

GENTLEMEN—The works are generally in most excellent condition, considering the severity of the winter, and other causes incidental to such works. The past winter has been one of unusual coldness. During the extreme weather men had to be kept constantly, night and day, cleaning snow and ice from the screens leading to the pumps. It has been worse this year than ever known. No damage, however, has resulted from this inconvenience. A new waste weir has been put in the lower end of the race, which will, to a great extent, obviate the trouble with the screens hereafter.

In May last, the Watering Committee directed the Chairman, Superintendent, and Superintendent of the Pump House to visit the Northern cities for the purpose of examining the improvements being made in water works. The works here having been built after the plan of those in Philadelphia, a more close examination was made of these. The new pumps at Fairmount differ very materially from the original ones, and are considered much more efficient. In Baltimore and New York the works are supplied by gravitation, and their pipe system similar to our own. Nothing of interest was obtained. The new plan of water works, known as the Holly system, was examined generally—its practicability and durability is doubted by the engineers of such cities as were visited. The chief objection is the total dependence on the pumps—no reservoir being used to keep up the supply. Ma-

chinery, however well built, is liable to get out of order. For a small level city these works might be used ; but for a city like ours, so undulating, a double set of works would be required, and then it is a matter of doubt whether the old pipe in the works here would stand the alternating strain. To introduce such works here would be attended with heavy expense—much heavier than the value of the plan would justify.

The connection of the 24-inch pipe was made with Reservoir in July last, on the syphon plan, and works well. This work was done with much less expense than tunnelling or cutting through the embankment, and did not hazard the structure, nor inconvenience the citizens a single day.

The building of a new Reservoir is a matter of great importance, as the present one, in case of stoppage to the pumps, will supply the city only three days. The plan proposed now, is to use the present Reservoir only for the supply of the lower parts of the city, as its elevation is amply sufficient for that purpose, and build a new one alongside, twenty feet higher, for the supply of the more elevated parts of the city, using the 24-inch main put down in 1861, for this purpose, and the two old ones (10 and 12-inch) connected with the new line of pipes now being laid in Cary street, for the lower. By this arrangement, the divisions of the City will be much better supplied. No general plan has been made for the proposed Reservoir, but as soon as the Spring opens this work will be commenced.

The work of laying the new pipe in Cary street was commenced December 16th, and has been laid up to Shockoe Creek. Owing to the extreme bad weather, progress has been slow, and will be until the wider portion of this street is reached. The numerous culverts being so near the surface, have given a good deal of trouble ; so far, however, they have

been passed without much damage to them. Much the larger proportion of the pipe and castings for this work has been made, and no inconvenience may be anticipated on account of castings.

It gives me pleasure to add my testimony to the faithful performance of both officers and men connected with the Water Department.

All of which is respectfully submitted.

J. L. DAVIS, *Sup't.*

RICHMOND, Feb. 1st, 1873.

## LIST OF ACCOUNTS

*Audited for Payment against the City Water Works, for the  
year ending February 1st, 1873.*

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1872.	
Feb. 2, David Wilson, painting.....	\$ 21 85
J. L. Davis, salary.....	150 00
W. J. Riddick, salary.....	104 17
J. P. Tyler, salary.....	83 34
Alex. Calder, salary.....	66 67
Pay roll for January.....	1,542 80
C. B. Lipscomb, coal.....	72 00
Ro. Wendenberg, glass, &c.....	26 58
W. L. Cox, brass work.....	110 00
H. Newman, feed.....	36 40
5, Ettenger & Edmond, S. C. boxes.....	73 50
9, R. L. Williams, hardware.....	106 07
J. Register & Sons, hydrants.....	54 00
10, Daniel O'Donnell, lead.....	14 17
G. & A. Bargamin, lead, &c.....	35 42
13, L. J. Schonberger, hauling.....	16 50
14, Booth, Spence & Co., sundries.....	117 31
16, W. B. Cook, iron work.....	73 30
24, Wm. E. Tanner & Co., iron pipe.....	1,473 78
J. H. Stanley, brick work.....	17 00
29, Daniel O'Donnell, lead.....	11 55
	<hr/>
	\$4,206 41
March 1, J. L. Davis, salary.....	\$ 150 00
Wm. J. Riddick, salary.....	104 17
J. P. Tyler, salary.....	83 34
Alex. Calder, salary.....	66 67
Pay roll for February.....	1,405 85
5, C. B. Lipscomb, coal.....	49 00
Evening News, printing.....	153 00
9, Joseph Hall & Co., iron work.....	334 35
G. & A. Bargamin, lead pipe, &c.....	48 80

Mar. 11,	R. L. Williams, hardware.....	23 47	
	Talbott, Ettenger & Edmond, S. C. boxes....	40 00	
14,	J. L. Davis, incidental expenses.....	131 88	
23,	L. J. Schonberger, hauling.....	23 75	
25,	Wm. E. Tanner & Co., stop-cocks.....	330 00	
			<hr/> \$2,944 34
April 1,	J. L. Davis, salary.....	150 00	
	Wm. J. Riddick, salary.....	104 17	
	John P. Tyler, salary.....	83 34	
	Alex. Calder, salary.....	66 67	
	Pay roll for March.....	1,585 45	
	Paul Bargamin & Co., lamps, &c.....	25 32	
2,	G. & A. Bargamin, lead pipe.....	18 10	
	C. B. Lipscomb, coal.....	47 50	
	Henry Newman, feed.....	39 36	
	R. L. Williams, hardware.....	73 22	
5,	J. W. Randolph & English, stationery.....	33 25	
6,	Talbott, Ettenger & Edmond, S. C. boxes...	66 00	
16,	Talbott & Sons, iron pipe.....	1,345 17	
	A. Arsell, Jr., & Co., lead.....	139 30	
22,	Booth, Spence & Co., upholstering.....	61 60	
	Robert Wood & Co., fountains.....	229 50	
25,	I. J. Mercer, lumber.....	329 77	
	R. T. H. Stileman, stop-cocks.....	127 25	
	Homer & Poole, brass work.....	87 80	
30,	J. D. Browne, iron work.....	25 00	
	William Tyree, paving.....	39 73	
			<hr/> \$4,677 50
May 1,	G. & Bargamin, lead pipe, &c.....	31 21	
	J. L. Davis, salary.....	150 00	
	Wm. J. Riddick, salary.....	104 17	
	J. P. Tyler, salary.....	83 34	
	Alex. Calder, salary.....	66 67	
	Pay roll for April.....	1,516 10	
20,	C. B. Lipscomb, coal.....	18 00	
	I. Hollander, paints, &c.....	34 40	
3,	R. L. Williams, hardware.....	45 42	
	James O'Keeffe, turfing.....	42 20	
4,	L. J. Schonberger, hauling.....	26 50	
6,	Talbott, Ettenger & Edmond, S. C. boxes....	95 00	
	Wm. E. Tanner & Co., iron pipe.....	380 88	
11,	Wallen & Wray, stone work.....	20 00	
	J. L. Davis, incidental expenses.....	153 26	
15,	Wm. E. Tanner & Co., stop-cocks.....	330 00	

May	18,	R. Maynard, bricks.....	26 00	
		R. A. Lacy, carpenters work.....	78 75	
		E. D. Kelley, do. ....	84 00	
	23,	Wm. H. Scott, oil, &c.....	150 23	
	27,	J. L. Davis, incidental expenses.....	300 00	
			<hr/>	\$3,736 13
June	1,	J. L. Davis, salary.....	150 00	
		W. J. Riddick, salary.....	104 17	
		J. P. Tyler, salary.....	83 34	
		Alex. Calder, salary.....	66 67	
		Pay roll for May.....	1,504 65	
	8,	William Tyree, paving,.....	64 39	
		R. L. Williams, hardware.....	92 48	
		Wm. E. Tanner & Co., iron pipe.....	486 72	
	10,	Habliston & Bro., chairs, &c.....	65 00	
	12,	Talbott, Ettenger & Edmond, S. C. boxes...	80 00	
	13,	H. M. Smith & Co., rope, &c.....	65 05	
	15,	James Gunn, lumber.....	43 79	
		I. Hollander, oil, &c.....	26 57	
	28,	G. & A. Bargamin, lead pipe, &c.....	193 88	
		John Morton, shrubbery,.....	27 75	
			<hr/>	\$3,054 46
July	1,	Talbott & Sons, iron work.....	972 68	
		J. L. Davis, salary.....	150 00	
		Wm. J. Riddick, salary.....	104 17	
		J. P. Tyler, salary.....	83 34	
		Alex. Calder, salary.....	66 66	
		Pay roll for June.....	1,176 30	
		Pay roll, Water Works extension, June....	197 30	
	2,	Henry Newman, feed.....	27 02	
		John Morton, shrubbery.....	35 07	
		J. W. Randolph & English, stationery.....	16 45	
	3,	I. J. Mercer, lumber.....	142 55	
	5,	R. L. Williams, hardware.....	83 13	
		Talbott, Ettenger & Edmond, S. C. boxes...	72 50	
	9,	James Gunn, lumber.....	31 21	
	12,	Tatham & Bros., block tin.....	39 04	
		H. M. Smith & Co., wheelbarrows.....	21 75	
	17,	Wm. E. Tanner & Co., fire plugs, &c.....	907 00	
	20,	King & Todd, cement.....	43 75	
		L. J. Schonberger, hauling.....	17 50	
	31,	G. & A. Bargamin, copper plate.....	47 60	
		G. & A. Bargamin, garden engine, &c.....	42 00	
			<hr/>	\$4,276 72
Aug.	1,	J. L. Davis, salary.....	150 00	

Aug.	1,	W. J. Riddick, salary.....	104 17	
		J. P. Tyler, salary.....	100 00	
		Alex. Calder, salary.....	83 34	
		Pay roll for July.....	1,142 75	
		Pay roll, Water Works extension, July.....	642 75	
		Wm. Tyree, paving.....	67 80	
		J. L. Davis, incidental expenses.....	132 85	
	2,	Blunt & Quay, brick work.....	60 00	
		R. L. Williams, hardware.....	55 90	
		James Gunn, lumber.....	12 92	
	6,	Homler & Poole, brass work.....	129 00	
		R. T. H. Stileman, stop-cocks.....	233 25	
	10,	H. M. Smith & Co., rope.....	81 58	
	23,	Paul Bargamin, lamps, &c.....	13 50	
		Talbott, Ettenger & Edmond, S. C. boxes...	114 00	
	30,	City Gas Works, coke.....	29 50	
				<hr/>
				\$3,153 30
Sept.	1,	J. L. Davis, salary.....	\$150 00	
		W. J. Riddick, salary.....	104 17	
		J. P. Tyler, salary.....	100 00	
		Alex. Calder, salary.....	83 34	
		Pay roll for August.....	1,771 51	
	3,	G. & A. Bargamin, stove pipe, &c.....	13 35	
		Henry Newman, feed.....	33 67	
		Kersey & Davis, horse troughs.....	71 90	
		C. B. Lipscomb, coal.....	161 00	
		R. L. Williams, hardware.....	67 15	
		Richmond Enquirer, printing.....	10 63	
	5,	Talbott, Ettenger & Edmond, S. C. boxes....	121 00	
		I. J. Mercer, lumber.....	240 90	
	7,	Wm. E. Tanner & Co., iron pipe.....	1,028 46	
	12,	Tatham & Bros., lead.....	514 03	
		A. Arsell, Jr., lead.....	52 00	
				<hr/>
				\$4,523 11
Oct.	1,	G. & A. Bargamin, valves and pipe.....	24 00	
		W. L. Cox, brass cocks.....	119 00	
		J. L. Davis, salary.....	150 00	
		W. J. Riddick, salary.....	104 17	
		J. P. Tyler, salary.....	100 00	
		Alex. Calder, salary.....	83 34	
		Pay roll for September.....	1,466 25	
	3,	Paul Bargamin, lead.....	41 50	
	4,	Wm. B. Cook, iron work.....	79 60	
	7,	R. L. Williams, hardware.....	78 49	

Oct.	7, Wm. E. Tanner & Co., iron work.....	1,086 06	
	10, Homer & Poole, brass work.....	222 00	
	Alois Rick, quarry.....	1,185 75	
	17, E. Cannon, stone lighter.....	150 00	
	19, R. T. H. Stileman, stop-cocks.....	127 25	
	Wm. E. Tanner & Co., fire plugs.....	525 00	
	do. do. do. ....	225 00	
	A. J. Blackburn, ice.....	31 60	
	21, Tatham & Bros., lead.....	429 81	
	Edward Vickers, derrick.....	100 00	
	Talbott & Sons, iron pipe.....	4,009 92	
	24, John Messler, repairing boat.....	145 89	
	Tyree & West, paving.....	30 40	
	Joseph Hall & Co., iron pipe.....	52 36	
	do. do. iron work.....	247 50	
	25, L. J. Schonberger, hauling.....	68 00	
	do. do. ....	16 25	
	do. do. ....	20 50	
	Joseph Hall & Co., iron pipe.....	291 45	
		<hr/>	\$11,211 09
Nov.	4, Joseph Hall & Co., 12-inch iron pipe.....	5,835 99	
	G. & A. Bargamin, stove, &c.....	21 00	
	5, Thos. Otis Leroy, block tin.....	33 58	
	Talbott, Ettenger & Edmond, S. C. boxes....	224 50	
	Joseph Hall & Co., frames and covers.....	82 78	
	R. L. Williams, hardware.....	258 77	
	do. do. ....	128 69	
	6, Paul Bargamin, rope yarn.....	80 20	
	Blount & Quay, brick work.....	17 50	
	8, H. M. Smith & Co., wheelbarrows.....	21 59	
	Henry Newman, feed.....	23 59	
	Joseph Hall & Co., iron pipe.....	175 81	
	E. F. Ragland, lumber.....	51 97	
	11, Thomas Smith, stone tools.....	19 37	
	R. A. Lacy, carpenter's work.....	85 00	
	George Place, brass work.....	140 48	
	W. H. Wade, Printing.....	26 00	
	13, E. & S. Wortham & Co., powder.....	51 00	
	J. L. Davis, incidental expenses.....	241 02	
	16, J. L. Carrington, sundries.....	67 30	
	19, John Bowers, lead.....	58 95	
	25, Tredegar Company, 20-inch iron pipe.....	8,380 55	
	J. L. Davis, salary.....	150 00	
	Wm. J. Riddick, salary.....	104 17	

Nov. 25, J. P. Tyler, salary.....	100 00	
Alex. Calder, salary.....	83 34	
Pay roll for October.....	1,405 85	
Pay roll for Oregon Hill, October.....	1,088 42	
Pay roll for Water Works extension, Oct...	763 06	
29, R. T. H. Stileman, stop-cocks.....	546 00	
		<hr/>
		\$20,466 39
Dec. 2, Talbott, Ettenger & Edmond, S. C. boxes...	184 00	
E. F. Ragland, lumber.....	525 62	
3, Tredegar Co., log carriers.....	25 00	
J. L. Davis, salary.....	150 00	
W. J. Riddick, salary.....	104 17	
J. P. Tyler, salary.....	100 00	
Alex. Calder, salary.....	83 34	
Pay roll for November.....	1,505 15	
Pay roll for Water Works extension, Nov...	2,257 62	
C. B. Lipscomb, coal.....	40 60	
R. L. Williams, hardware.....	36 96	
Do. do. ....	108 75	
13, Wm. E. Tanner & Co., fire plugs.....	232 50	
Do. do. ....	697 50	
Do. iron pipe.....	665 20	
Do. do. ....	128 70	
Paul Bargamin, lead.....	32 00	
G. & A. Bargamin, stove, &c.....	22 50	
Paul Bargamin, block tin.....	16 40	
16, Joseph Hall & Co., iron pipe,.....	1,952 03	
Do. iron work.....	107 70	
Do. do. ....	46 30	
Talbott & Sons, do. ....	599 90	
Do. do. ....	547 56	
Do. iron pipe.....	844 81	
P. J. Crew & Co., tallow.....	23 52	
Talbott & Sons, iron pipe.....	1,468 35	
Edward Vickers, derrick.....	60 00	
L. J. Schonberger, hauling.....	21 00	
Do. do. ....	70 00	
Do. do. ....	11 50	
I. J. Mercer, lumber.....	169 36	
Do. do. ....	656 18	
Tyree & West, paving.....	94 26	
17, Geo. Place, brass cocks.....	44 12	
Wm. E. Tanner & Co., iron work.....	29 85	
E. & S. Wortham & Co., powder.....	46 00	

Dec. 17, Thomas J. Smith, truck.....	15 00	
W. L. Cox, brass work.....	63 00	
R. T. H. Stileman, stop-cocks.....	270 50	
Joseph Hall & Co., iron pipe.....	294 80	
Do. iron work.....	333 47	
Tredegear Co., 20-inch pipe.....	7,700 51	
24, Do. do. ....	159 20	
27, Wm. E. Tanner & Co., iron pipes.....	3,105 09	
R. T. H. Stileman, stop-cocks.....	257 50	
J. L. Davis, labour.....	500 00	
31, George Place, brass work.....	108 70	
	<hr/>	\$26,316 22

1873.

Jan. 3. Daniel O'Donnell, lead.....	27 70	
L. S. Davis, incidental expenses.....	121 28	
J. L. Davis, salary.....	150 00	
Wm. J. Riddick, salary.....	104 17	
J. P. Tyler, salary.....	100 00	
Alex. Calder, salary,.....	83 34	
Pay roll for December.....	1,074 55	
Pay roll for Clay street extension, Dec.....	390 87	
Pay roll for Water Works extension, Dec....	2,678 00	
R. L. Williams, hardware.....	110 74	
Talbott, Ettenger & Edmond, S. C. boxes...	98 25	
4, R. L. Williams, hardware.....	126 38	
Paul Bargamin, waste.....	65 90	
City Gas Works, coke, &c.....	57 60	
Joseph Hall & Co., iron pipe.....	146 80	
10, G. & A. Bargamin, stove, &c.....	12 75	
Booth, Spence & Co., matting, &c.....	38 90	
Rahm & Co., oil, &c.....	103 69	
11, J. W. Randolph & English, stationery.....	45 90	
I. J. Mercer, lumber.....	209 18	
13, Wm. English & Son, sundries.....	28 15	
17, J. L. Apperson, agent, lot rent.....	120 00	
20, J. M. Fourquerean, horse.....	120 00	
21, L. J. Schonberger, hauling.....	88 00	
Do do. ....	28 00	
Daniel O'Donnell, lead.....	13 20	
23, King & Todd, cement,.....	69 00	
	<hr/>	\$6,212 35
		<hr/>
		\$94,778 02

## A STATEMENT

*Showing the Gross Receipts of the City Water Works, for  
the year ending February 1st, 1873.*

1872—March 1.	Received for water rents in February,	\$ 81 00	
	do. in Supt's office in January...	175 25	
		<hr/>	\$ 256 25
April 1.	Received for water rents in March....	11,105 43	
	do. in Supt's office in February..	204 75	
		<hr/>	11,310 18
May 1.	Received for water rents in April....	57 75	
	do. in Supt's office in March.....	239 67	
		<hr/>	297 42
June 1.	Received for water rents in May.....	7,091 90	
	do. Supt's in office in April.....	354 50	
		<hr/>	7,446 40
July 1.	Received for water rents in June.....	16 50	
	do. in Supt's office in May.....	447 70	
		<hr/>	464 20
August 1.	Received for water rents in July.....	6,590 78	
	do. in Supt's office in June.....	244 30	
		<hr/>	6,835 08
Sept. 1.	Received for water rents in August..	58 69	
	do. in Supt's office in July.....	293 09	
		<hr/>	351 78
Oct. 1.	Received for water rents in Sept.....	11,490 49	
	do. in Supt's office in August. :	204 20	
		<hr/>	11,694 69
Nov. 1.	Received for water rents in October.,	24 75	
	do. in Supt's office in Sept.....	372 47	
		<hr/>	397 22
Dec. 1.	Received for water rents in Nov.....	7,395 34	
	do. in Supt's office in October..	133 56	
		<hr/>	7,528 90

1873—Jan.	1.	Received for water rents in December,	24 00	
		do. in Supt's office in Nov.....	93 70	
			<hr/>	117 70
Feb.	1.	Received for water rents in January.	7,103 41	
		do. in Supt's office in December..	160 50	
			<hr/>	7,263 91
				<hr/>
				53,963 73
1872—June	19.	Received of State of Virginia, (Peni-		
		tentiary).....	1,743 50	
Nov.	26.	Received of City of Richmond, (City		
		Jail).....	255 05	
			<hr/>	1,998 55
				<hr/>
				\$55,962 28

## AMOUNT OF FRACTIONAL WATER RENTS

*Received in the Office of the City Water Works, during the  
year ending February 1st, 1873*

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1872—Received in	January.....	\$175 25
do.	February.....	204 75
do.	March.....	239 67
do.	April.....	354 50
do.	May .....	447 70
do.	June.....	244 30
do.	July.....	293 09
do.	August.....	204 20
do.	September.....	372 47
do.	October.....	133 56
do.	November .....	93 70
do.	December .....	160 50
		\$2,923 69

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# SIZE, LOCATION AND COST

*Of Extension of Main Pipes, including Branch Pipes, Stop  
Cocks and Fire Plugs, Laid during the year  
ending February 1st, 1873.*

333 feet 6-inch pipe on 23d street north of Broad street.....	\$575 71
482 feet 6-inch pipe on Cherry, from Main to Cary street.....	} 1,290 12
204 feet 6-inch pipe on Cary, east of Cherry street.....	
329 feet 6-inch pipe on Clay, between 7th and 8th streets.....	549 03
324 feet 4-inch pipe on Baker, east of 5th street.....	} 896 18
304 feet 4-inch pipe on 6th, south of Baker street.....	
270 feet 6-inch pipe on Clay, west of Gilmer.....	378 70
54 feet 4-inch pipe on Arch and 9th streets.....	69 70
243 feet 6-inch pipe on Rocketts, east of Ash street.....	429 61
333 feet 6-inch pipe on Laurel, south of Franklin street.....	661 10
200 feet 3-inch pipe on Arch, between 7th and 8th streets.....	392 50
412 feet 4-inch pipe on 1st, from Federal to Coutts street.....	671 00
403 feet 4-inch pipe on 11th, between Main and Cary streets.....	627 00
325 feet 6-inch pipe on Grace, from Pine to Laurel.....	778 50
498 feet 4-inch pipe on 1st, between Coutts and Orange streets....	} 967 00
146 feet 4-inch pipe on Orange, west of 1st street.....	
309 feet 4-inch pipe on Duval, east of St. James.....	449 75
187 feet 3-inch pipe on Arch street, west of 7th street.....	283 65
144 feet 4-inch pipe on Broad, east of 27th street.....	271 50
90 feet 4-inch pipe on Baker, between St. John and St. Paul.....	126 50
18 feet 4-inch pipe on Grace and Jefferson, for fire plug.....	113 50
18 feet 4-inch pipe on Leigh and Foushee, for fire plug.....	113 50
6 feet 4-inch pipe on Duval and 2d streets, for waste.....	95 00
216 feet 4-inch pipe on Main, north of 10th street.....	} 880 20
198 feet 6-inch pipe on Main, south of 10th street.....	
1451 feet 6-inch pipe on Pine, between Albemarle and Holly.....	} 7,228 29
406 feet 6-inch pipe on Holly, from Pine to Belvidere.....	
372 feet 6-inch pipe on Belvidere, from Holly to Rowe.....	
242 feet 4-inch pipe on Holly, from Church to Belvidere.....	
486 feet 4-inch pipe on Rowe, from Belvidere to Howard.....	
712 feet 4-inch pipe on Church, from Holly to Maiden Lane.....	
110 feet 4-inch pipe on Howard, north of Rowe.....	
18 feet 4-inch pipe on Canal and 6th, for fire plug.....	127 10
126 feet 4-inch pipe on Pine, south of Holly.....	178 25
1377 feet 6-inch pipe on Clay, from Graham to Denny.....	3,070 00
11246 feet.	Total cost..... \$21,223 39

## A STATEMENT

*Showing the Receipts and Disbursements of the City Water Works, from the commencement, October 7th, 1830, to the 1st of February, 1873.*

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Total amount of disbursements from October 7th, 1830, to 1st February, 1872.....	\$1,240,869 48	
Total amount of disbursements from February 1st, 1872, to February 1st, 1873.....	94,778 02	
	<hr/>	\$1,335,647 50
Total amount of receipts from October 7th, 1830, to 1st February, 1872.....	\$1,047,516 67	
Total amount of receipts from 1st February, 1872, to 1st February, 1873.....	55,962 28	
	<hr/>	\$1,103,478 95
Balance against the Works.....		\$232,168 55
Total value of inventory.....		\$35,014 91

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## ELEVATION OF THE RESERVOIR

*Above the following points of the City :*


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5th, between Grace and Franklin streets.....	19 feet	6 inches
Grace and 5th streets.....	20 feet	6 inches
Franklin and 2d streets.....	20 feet	7 inches
do. and Adams streets.....	21 feet	4 inches
do. and 1st streets.....	23 feet	7 inches
do. and Foushee streets.....	25 feet	6 inches
do. and 5th streets.....	25 feet	0 inches
Grace and Adams streets.....	25 feet	4 inches
Grace and 2d streets.....	25 feet	6 inches
Main and 2d streets.....	26 feet	3 inches
Broad and 5th streets.....	28 feet	4 inches
Marshall and 9th streets.....	28 feet	9 inches
Franklin and 3d streets.....	30 feet	4 inches
Broad and Foushee streets.....	31 feet	6 inches
Broad and 3d streets.....	31 feet	9 inches
Marshall and Foushee streets.....	32 feet	0 inches
Broad and 7th streets.....	30 feet	9 inches
Leigh and 6th streets.....	36 feet	0 inches
Clay and 10th streets.....	36 feet	3 inches
Leigh and 8th streets.....	37 feet	2 inches
Cary and 1st streets.....	38 feet	3 inches
Broad and 9th streets.....	38 feet	4 inches
Leigh and 9th streets.....	39 feet	7 inches
Cary and 2d streets.....	40 feet	2 inches
Clay and 11th streets.....	40 feet	2 inches
Cary and Foushee streets.....	42 feet	3 inches
Cary and 3d streets.....	42 feet	10 inches
Baker and 6th streets.....	43 feet	0 inches
Marshall and 11th streets.....	46 feet	2 inches
Grace and 27th streets.....	46 feet	9 inches
Broad and 11th streets.....	47 feet	6 inches
Broad and 26th streets.....	47 feet	9 inches
Jackson and 9th streets.....	48 feet	0 inches
Leigh and 10th streets.....	48 feet	7 inches

Broad and 27th streets.....	48 feet 7 inches
Grace and 26th streets.....	49 feet 0 inches
Arch and 3d streets.....	53 feet 10 inches
Canal and 3d streets.....	54 feet 0 inches
Broad and 26th streets.....	54 feet 4 inches
Broad and 24th streets.....	54 feet 7 inches
Arch and 4th streets.....	55 feet 7 inches
Cary and Madison streets.....	57 feet 9 inches
Broad and 12th streets.....	56 feet 9 inches
Byrd and 3d streets.....	57 feet 5 inches
Broad and 23d streets.....	65 feet 0 inches
Broad and 31st streets.....	67 feet 0 inches
Broad and 22d streets.....	87 feet 0 inches
Broad and College streets.....	92 feet 4 inches
Broad and 21st streets.....	108 feet 2 inches
Broad street and Jail Alley.....	123 feet 0 inches
Broad and 20th streets.....	133 feet 9 inches
Broad and 19th streets.....	155 feet 9 inches
Main and 14th streets.....	156 feet 7 inches
Cary and 13th streets.....	150 feet 6 inches
Main and 22d streets.....	145 feet 3 inches
Broad and 18th streets.....	164 feet 0 inches
Cary and 25th streets.....	165 feet 7 inches
Broad and 17th streets.....	170 feet 9 inches
Broad and 16th streets.....	177 feet 0 inches
Main and 15th streets.....	177 feet 9 inches
Main and 17th streets.....	187 feet 10 inches

# RICHMOND CITY WATER WORKS.

Number of Gallons of Water Pumped during the year ending February, 1873.

1872 and 1873. MONTHS.	Gallons Pumped each month.	Average Pumped each day.	No. of Hours Worked each month.	Average Hours Worked each day	Average Tempera- ture 6 A. M. each month.
February.....	70,122,000	2,418,000	467½	16	28 degrees.
March.....	71,910,000	2,319,677	479½	15	31 do.
April .....	66,324,000	2,210,800	442	15	49 do.
May.....	70,193,000	2,264,290	467	15	60 do.
June.....	73,251,700	2,441,700	488	16	73 do.
July.....	83,304,000	2,687,226	555	17	77 do.
August.....	88,650,000	2,859,677	591	19	73 do.
September.....	78,100,000	2,603,333	520½	18	63 do.
October.....	80,418,000	2,594,129	536½	17	49 do.
November.....	73,200,000	2,440,000	488	17	36 do.
December .....	88,048,000	2,840,218	587	19	26 do.
January—1873 .....	78,450,000	2,530,645	523	17	30 do.
	921,970,000	2,517,477½	6,145	17½	49½

## A STATEMENT

*Showing the Condition of the Weather during the year ending  
February 1st, 1873, each morning at six o'clock.*

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There were.....	231 clear mornings.	
There were.....	99 cloudy	do.
There were.....	21 rainy	do.
There were.....	11 snowy	do.
There were.....	3 foggy	do.

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## INVENTORY

*Of Materials on hand, belonging to the City Water Works,  
February, 1873.*

## AT THE OFFICE.

1	12-inch stop-cock.....	\$95 00
1	10-inch do. ....	75 00
1	8-inch do. ....	70 00
2	4-inch do. ....	84 00
2	3-inch do. ....	96 00
6	6-inch do. (new pattern).....	240 00
3	12-inch do. do. ....	285 00
12	12-inch do. (Talbot's).....	720 00
14	4-inch bonnetts.....	10 50
2	12-inch bonnetts.....	6 00
1	3-inch S bend.....	7 00
3	6x4-inch diminishing pipes.....	12 00
1	4-inch diminishing pipe.....	2 00
10	4-inch sleeves.....	24 00
7	6-inch sleeves.....	24 50
5	6-inch pipe.....	60 00
22	2-feet stop-cock boxes.....	77 00
10	2½-feet do. do. ....	40 00
1	4x6-inch double branch pipe.....	15 00
2	4-inch bends.....	8 00
1	3-inch bend.....	7 00
1	Lot of lumber.....	15 00
11	1-inch tapping cocks.....	27 50
37	¾-inch do. ....	74 00
58	⅝-inch do. ....	87 00
46	½-inch do. ....	58 00
14	1¼-inch ruff. stop-cocks.....	35 00
24	⅞-inch do. ....	48 00
64	¾-inch do. ....	112 00
51	⅝-inch do. ....	76 00
	½-inch compression cocks.....	6 00
	⅜-inch stop-cock.....	1 50
		<hr/>
		\$2,493 00

## PIPE YARD—SEVENTH STREET.

101	6-inch pipe.....	\$1,212 00	
28	3-inch pipe.....	140 00	
17	4-inch pipe.....	136 00	
16	6x6-inch double branches.....	192 00	
7	6x6-inch single branches.....	56 00	
8	4x4-inch do. ....	48 00	
5	6x4-inch double branches.....	35 00	
5	Stop-cock covers.....	40 00	
3	4x6-inch single branches.....	18 00	
6	4x6-inch diminishing pipes.....	18 00	
1	3x4-inch diminishing pipe.....	2 50	
240	20-inch pipe, Water Works extension.....	23,970 00	
14	16-inch pipe, do. do. ....	957 00	
		<hr/>	\$26,824 50

## AT THE PUMP HOUSE.

16	Arms for water wheels.....	\$192 00	
300	Pounds cotton waste.....	60 00	
100	Pounds packing yarn.....	35 00	
40	Pounds gum packing.....	24 00	
5	Segments for water wheels.....	120 00	
44	Gallons of sperm oil.....	77 00	
23	Gallons of kerosine.....	9 20	
125	Pounds tallow.....	15 00	
2	Keg nails, assorted.....	14 00	
6	Small valves for pumps.....	450 00	
4	Large valves for pumps.....	540 00	
1	Lot of bolts for wheels.....	175 00	
1	Lot of paints, &c.....	30 00	
1,000	Feet assorted lumber.....	28 00	
1	Boiler and furnace.....	75 00	
4,500	Feet bucket lumber.....	126 00	
5	Tons coal.....	45 00	
1	Lot of brass keys for pumps.....	15 00	
1	Lot of brass gibbs.....	10 00	
		<hr/>	\$2,040 20

## AT THE RESERVOIR.

17	24-inch pipe.....	\$1,812 00
8	16-inch pipe.....	384 00
13	12-inch pipe.....	468 00

10 10-inch pipe.....	240 00
23 8-inch pipe.....	414 00
10 6-inch pipe.....	120 00
8 3-inch pipe.....	40 00
2 3-inch S bends.....	10 00
12 4-inch fire plugs.....	72 00
2 8x12 inch circles.....	30 00
3 8x8-inch circles.....	30 00
7 6-inch double hubbs.....	63 00
2 4-inch do. ....	12 00
7 4-inch do. ....	35 00
4 6x12-inch diminishing pipes.....	60 00
8 6x10-inch do. ....	80 00
2 12x16-inch do. ....	40 00
1 6x16-inch do. ....	18 00
1 8x16-inch do. ....	20 00
5 8-inch bevel hubbs.....	56 00
1 10-inch do. ....	15 00
3 12-inch turns.....	45 00
1 24-inch sleeve.....	24 00
5 16-inch sleeves.....	120 00
6 12-inch sleeves.....	42 00
2 10-inch sleeves.....	10 00
2 8-inch sleeves.....	10 00
4 12x6-inch diminishing pipes.....	40 00
9 16-inch bonnetts.....	72 00
11 12-inch bonnetts.....	66 00
	————— \$4,448 00

#### AT THE PUMP HOUSE—FOR ENLARGING THE WORKS.

1 Derrick, complete.....	100 00
2 Derricks, unfinished.....	100 00
1 Stone truck.....	15 00
500 Feet three-quarters guy rods.....	130 00
250 Feet five-eighths guy rods.....	50 00
1 Pump, complete, in foundation.....	375 00
11 Wheel-barrows.....	55 00
18 Shovels.....	22 50
12 Picks.....	15 00
12 Crowbars.....	36 00
20 Drills and two derrick chains.....	17 50
4 Hand hammers.....	12 00
1 Striking hammer.....	2 00

3	Masons' hammers.....	10 75
2	Chisels and nine points.....	5 00
17	Pick and ten hammer handles.....	6 75
3	Spades and mattocks.....	7 50
1	Blacksmith shop and tools.....	150 00
500	Feet two inch boards.....	15 00
9	Trussels.....	18 00
8	Barrels cement.....	19 20
2	Hand trucks.....	25 00
1	Set car wheels, axles, &c.....	45 00
1,000	Feet assorted lumber.....	28 00
1	Spirit level.....	1 25
1	Lot of bolts and washers.....	13 60
1	Boat pump.....	8 00
1	Watch tackle.....	9 00
1	Lot lumber for bridge and dam.....	656 18
		<hr/>
		\$1,949 23

#### AT THE QUARRY—FOR ENLARGING THE WORKS.

1	Stone boat.....	250 00
2	Full rigged derricks.....	400 00
1	Large stone shed.....	100 00
1	Blacksmith shop and tools.....	150 00
2	Small tool houses.....	50 00
1	Office and fixtures.....	50 00
1	Large tool box.....	15 00
1	Tool chest.....	2 00
10	Tool cutters' boxes.....	10 00
1	Lot banker blocks.....	10 00
1	Powder house.....	15 00
3	Kegs powder.....	13 50
1,000	Feet fuse.....	5 00
50	Hand drills.....	37 50
100	Points and chisels.....	75 00
12	Large jumpers.....	27 00
6	Block-hole jumpers.....	8 50
1	Bar of steel.....	2 88
7	Bars wedge steel.....	14 40
4	Bars drill steel.....	10 80
200	Sets of small wedges, &c.....	50 00
20	Sets of wedges and half-rounds.....	10 00
7	Axe hammers.....	21 00
3	Hand hammers.....	7 50

7 Striking hammers.....	28 00	
6 Face hammers.....	50 00	
1 Large sledge.....	12 50	
2 Large crowbars.....	20 00	
7 Small crowbars.....	22 40	
1 Carpenter's bench and vise.....	5 00	
1 Axe, saw, hatchet and wrench.....	5 00	
2 Long runners.....	5 00	
1 Lot scrapers.....	5 00	
2 Quarry pumps.....	5 00	
1 Hand car.....	50 00	
1 Large pot.....	2 00	
4 Dozen hammer handles.....	12 00	
12 Stone wheel-barrows.....	84 00	
6 Dirt wheel-barrows.....	30 00	
1 Lot straight edges.....	6 00	
7 Guages and one square.....	9 00	
4 Double and single blocks.....	17 00	
	<hr/>	\$1,702 98
		<hr/>
		\$35,014 91

## TOTAL AMOUNT EXPENDED

*On account of the Enlargement of the Water Works, from May 15th, 1871, to February 1st, 1878—Appropriations made May 15th, 1871, \$75,000, and June 24th, 1872, \$200,000.*

1871.

May 15,	Tatham & Bros., lead.....	\$365 45	
Oct. 21,	W. E. Tanner & Co., stop-cocks.....	771 50	
Nov. 29,	Joseph Hall & Co., 24-inch iron pipe.....	3,699 30	
Dec. 16,	do. do. 24-inch turns.....	666 84	
	28, Talbott & Sons, 12-inch stop-cocks.....	1,020 98	
	Bossieux & Co., hauling 24-inch pipe.....	33 75	
	P. Bargamin & Co., rope yarn.....	100 40	
			\$6,658 22

1872.

July 1,	Labor, at Reservoir.....	197 30	
	31, G. & A. Bargamin, strainer.....	47 60	
Aug. 2,	Blount & Quay, brick-work.....	60 00	
	Labor, at Reservoir.....	642 75	
Sept. 12,	Tatham & Bros., lead.....	514 03	
Oct. 10,	Alois Rick, quarry, &c.....	1,185 75	
	17, E. Cannon, lighter.....	150 00	
	21, Edward Vickers, Derrick.....	100 00	
	23, John Messler, repairing boat.....	145 89	
	Joseph Hall & Co., castings.....	291 45	
	25, L. J. Schonberger, hauling.....	20 50	
Nov. 1,	Labor, quarry and Pump House.....	763 06	
	4, Joseph Hall & Co., 12-inch pipe.....	5,835 99	
	6, P. Bargamin, rope yarn.....	80 20	
	R. L. Williams, hardware.....	258 77	
	8, H. M. Smith & Co., wheel-barrows.....	21 50	
	E. F. Ragland, lumber.....	51 97	
	11, Thomas Smith, tools.....	19 37	
	R. A. Lacy, carpenter's work.....	85 00	
	W. H. Wade, printing.....	26 00	
	13, E. & S. Wortham & Co., powder.....	51 00	

	16,	R. L. Carrington, board of engineer.....	67 30	
	25,	Tredegar Company, 20-inch pipe.....	8,380 55	
	29,	R. T. H. Stileman, stop-cocks.....	546 00	
Dec.	3,	Tredegar Company, log carriers.....	25 00	
		E. F. Ragland, lumber.....	525 62	
		Labor, November.....	2,257 62	
		C. B. Lipscomb, coal.....	40 60	
		R. L. Williams, hardware.....	108 75	
	9,	Edward Vickers, derrick.....	60 00	
		L. J. Schonberger, hauling.....	70 00	
		Talbott & Sons, castings.....	599 90	
	11,	Wm. E. Tanner & Co., fire plugs.....	697 50	
	16,	Joseph Hall & Co., iron work.....	107 70	
		I. J. Mercer, lumber.....	656 18	
		Talbott & Sons, iron pipe.....	1,468 35	
	18,	E. & S. Wortham & Co., powder.....	46 00	
		Thomas J. Smith, truck.....	15 00	
		R. T. H. Stileman, stop-cocks.....	270 50	
	19,	Joseph Hall & Co., iron pipe.....	333 47	
	21,	Tredegar Company, 20-inch iron pipe.....	7,700 51	
	24,	do. do. iron pipe.....	159 20	
	27,	W. E. Tanner & Co., iron pipe.....	3,105 09	
1873.				
Jan.	1,	Labor, December.....	2,678 00	
		R. T. H. Stileman, stop-cocks.....	257 50	
	4,	R. L. Williams, hardware.....	126 38	
		I. J. Mercer, lumber.....	209 18	
	20,	L. J. Schonberger, hauling.....	88 00	
		do. do. ....	23 00	
	23,	King & Todd, cement.....	69 00	
			<hr/>	\$41,245 03
				<hr/>
				\$47,903 25

## A STATEMENT

*Showing the Number of Feet of Iron Pipe laid each year, from the commencement, viz: October 7th, 1830, to the 1st of February, 1873.*

					Feet.
Iron Pipe laid down	October 7th, 1830, to	April 30th, 1847	.....		90,068
Do.	during the year ending	April 30th, 1848	.....		2,461
Do.	do.	do.	do. 30th, 1849	.....	3,595
Do.	do.	do.	do. 30th, 1850	.....	4,169
Do.	do.	do.	do. 30th, 1851	.....	3,311
Do.	do.	do.	do. 30th, 1852	.....	10,759
Do.	do.	do.	do. 30th, 1853	.....	4,635
Do.	do.	do.	do. 30th, 1854	.....	3,936
Do.	do.	do.	do. 30th, 1855	.....	12,154
Do.	do.	do.	do. 30th, 1856	.....	19,790
Do.	do.	do.	do. 30th, 1857	.....	4,941
Do.	do.	do.	do. 30th, 1858	.....	3,381
Do.	do.	do.	Feb'y 28th, 1859	.....	4,485
Do.	do.	do.	do. 28th, 1860	.....	10,542
Do.	do.	do.	do. 28th, 1861	.....	15,112
Do.	do.	do.	do. 28th, 1862	.....	1,282
Do.	do.	do.	do. 28th, 1863	.....	
Do.	do.	do.	do. 28th, 1864	.....	
Do.	do.	do.	do. 1st, 1865	.....	
Do.	do.	do.	do. 1st, 1866	.....	
Do.	do.	do.	do. 1st, 1867	.....	205
Do.	do.	do.	do. 1st, 1868	.....	4,450
Do.	do.	do.	do. 1st, 1869	.....	1,364
Do.	do.	do.	do. 1st, 1870	.....	1,198
Do.	do.	do.	do. 1st, 1871	.....	6,762
Do.	do.	do.	do. 1st, 1872	.....	12,674
Do.	do.	do.	do. 1st, 1873	.....	11,346
					<hr/>
					232,620
Less small pipe taken up					8,024
					<hr/>
Total feet					224,596

## TOTAL LENGTHS AND SIZES

*Of Main Iron Pipes laid for the Water Works, from their commencement, viz : Oct. 7th, 1830, to 1st Feb., 1873.*

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Of $1\frac{1}{2}$ inches diameter.....	11,214
Of 2 do. ....	1,609
Of 3 do. ....	27,517
Of 4 do. ....	78,223
Of 6 do. ....	54,465
Of 8 do. ....	17,174
Of 10 do. ....	8,070
Of 12 do. ....	13,643
Of 16 do. ....	6,060
Of 24 do. ....	6,581
<hr/>	
Total feet .....	224,556
Total length,..... $42\frac{1}{2}$ miles.	

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## LOCATION AND SIZES

### *Of Main Pipes of the City Water Works.*

#### PUMP MAINS.

2,500 feet 12-inch pipe from Pump No. 1 to the Reservoir.			
2,500 feet 12-inch	do.	No. 2 to	do.
2,500 feet 8-inch	do.	No. 3 to	do.
2,500 feet 8-inch	do.	No. 4 to	do.
2,500 feet 8-inch	do.	No. 5 to	do.
2,500 feet 8-inch	do.	No. 6 to	do.

#### *Supply Mains from the Reservoir to the City, as originally laid down.*

- 6,170 feet 10-inch pipe from the Reservoir through Hollywood Cemetery, alongside 12-inch pipe to Main and Jefferson streets, down Main street, east to 1st, and north to Broad street, laid in 1832.
- 6,024 feet 12-inch pipe from the Reservoir through Hollywood Cemetery, in a straight line alongside 10-inch pipe to Main and Jefferson streets, along Jefferson north under the western gutter to Franklin street, down Franklin east to 3d street, laid in 1848.
- 6,581 feet 24-inch pipe from the Reservoir along Reservoir street to Main, thence east along Main to 3d street, laid in 1861.

#### HOLLY STREET.

- 406 feet 6-inch from Pine to Belvidere street.
- 242 feet 4-inch from Belvidere to Church street.
- 486 feet 4-inch from Belvidere to Howard street,

#### ARCH STREET.

- 204 feet 3-inch from 4th street, west.
- 187 feet 3-inch from 7th street, west.
- 376 feet 3-inch from 7th street, east.

## BYRD STREET.

- 1,000 feet 3-inch pipe on tow-path of J. R. & K. Canal, west of Armory to Tredegar works.
- 333 feet 6-inch pipe from Pine to Penitentiary grounds.
- 200 feet 4-inch pipe from inside Armory building.
- 825 feet 4-inch pipe from west of 6th street along the tow-path of J. R. & K. Canal to west of Armory.
- 1,875 feet 4-inch pipe from 6th to 12th street.
- 27 feet 4-inch pipe from Byrd and 8th streets to fire plug.
- 225 feet 4-inch pipe on 12th street, south to Haxall's mills.
- 400 feet 4-inch pipe from 3d to 4th street.

## CANAL STREET.

- 261 feet 4-inch pipe west of 1st street.
- 220 feet 3-inch pipe from 14th to Virginia street.
- 18 feet 3-inch pipe on 9th street, for fire plug.
- 675 feet 4-inch pipe from 1st to 3d street.
- 330 feet 1½-inch pipe from 4th to 5th street.
- 700 feet 3-inch pipe from 5th to 7th street.
- 637 feet 4-inch pipe from 10th to 12th street.
- 466 feet 3-inch pipe on Dock, east of 15th street, into the City Gas Works.

## CARY STREET.

- 200 feet 6-inch pipe east of Cherry street.
- 637 feet 6-inch pipe from Adams to 1st street.
- 323 feet 4-inch pipe from 1st to 2d street.
- 225 feet 4-inch pipe from 2d street east.
- 337 feet 6-inch pipe from 3d to 4th street.
- 330 feet 1½-inch pipe from 4th to 5th street.
- 200 feet 1½-inch pipe from 5th street east.
- 168 feet 4-inch pipe from 6th street east.
- 675 feet 6-inch pipe from 7th to 9th street.
- 5,280 feet 3-inch pipe from 9th to 23d street.
- 550 feet 6-inch pipe from 23d to 25th street.

## MAIN STREET.

- 1,760 feet 24-inch pipe from Reservoir to Belvidere street.
- 2,700 feet 24-inch pipe from 3d to Belvidere street.
- 970 feet 10-inch pipe from Jefferson to 1st street.
- 3,900 feet 6-inch pipe from 1st to 13th street.
- 2,100 feet 4-inch pipe from 13th to 18th street.
- 2,010 feet 3-inch pipe from 18th to 24th street.

- 1,012 feet 8-inch pipe from 24th to 27th street.
- 1,275 feet 6-inch pipe from Pear to Ash street.
- 243 feet 6-inch pipe from Ash to Elm street.
- 675 feet 4-inch pipe, from Rocketts on Bloody Run street, to Elm street.
- 650 feet 3-inch pipe, from Bloody Run east from Elm street, into City Gas Works.
- 104 feet 3-inch pipe, into Monroe Park, for fountain.

## FRANKLIN STREET.

- 2,529 feet 6-inch pipe from Shafer to Jefferson street.
- 50 feet 4-inch pipe for fire plugs.
- 1,612 feet 12-inch pipe from 3d to Jefferson street.
- 1,987 feet 6-inch pipe from 3d to 9th street.
- 300 feet 1½-inch pipe from 9th to 10th on Bank street.
- 290 feet 3-inch pipe from 11th to 12th street.
- 100 feet 4-inch pipe from 13th street west.
- 5,800 feet 4-inch pipe from 13th to 29th street.

## GRACE STREET.

- 2,152 feet 6-inch pipe from Laurel to Adams street.
- 637 feet 4-inch pipe from 1st to Adams street.
- 1,312 feet 6-inch pipe from 1st to 5th street.
- 1,312 feet 4-inch pipe from 5th to 9th street.
- 1,087 feet 6-inch pipe from 9th around Washington Monument, along the avenue east through the Governor's house, to Governor street north of Ross street.
- 472 feet 6-inch pipe from along Governor to east of Ross street.
- 207 feet 4-inch pipe from 17th street west.
- 330 feet 3-inch pipe from 18th to 19th street.
- 233 feet 3-inch pipe from 22d street west.
- 1,875 feet 4-inch pipe from 22d to 28th street.

## BROAD STREET.

- 6,077 feet 6-inch pipe from Shafer to 9th street.
- 3,675 feet 16-inch pipe from 3d to Mayo street.
- 1,575 feet 4-inch pipe from 9th to Mayo street.
- 4,575 feet 8-inch pipe from 27th to Mayo street.
- 283 feet 4-inch pipe from 27th street east.

## MARSHALL STREET.

- 1,593 feet 6-inch pipe from Graham to Henry street.
- 1,275 feet 4-inch pipe from Graham to Henry street.
- 4,200 feet 6-inch pipe from 12th to Adams street.
- 250 feet 3-inch pipe from 12th street east.

- 600 feet 4-inch pipe from Jail Alley to the Creek.
- 300 feet 4-inch pipe from 17th street east to C. & O. Railroad.
- 184 feet 4-inch pipe from 17th street east.

## CLAY STREET.

- 3,317 feet 6-inch pipe from Kenny to Brook Avenue.
- 600 feet 4-inch pipe from Adams street to Brook Avenue.
- 640 feet 1½-inch pipe from 1st to Adams street.
- 66 feet 6-inch pipe from east to west side 1st street.
- 340 feet 1½-inch pipe from 1st to 2d street.
- 290 feet 3-inch pipe from 2d street east.
- 110 feet 4-inch pipe from 3d street west.
- 1,200 feet 6-inch pipe from 3d to 7th street.
- 1,129 feet 6-inch pipe from 7th to 10th street.
- 660 feet 3-inch pipe from 10th to 12th street.
- 337 feet 4-inch pipe from 17th to 18th street,

## LEIGH STREET.

- 2,478 feet 6-inch pipe from Munford to 1st street.
- 1,312 feet 4-inch pipe from 2d to 6th street.
- 330 feet 3-inch pipe from 6th to 7th street.
- 675 feet 6-inch pipe from 7th to 9th street.
- 337 feet 4-inch pipe from 9th to 10th street.
- 536 feet 4-inch pipe from 17th on Venable to 18th street.

## JACKSON STREET.

- 1,466 feet 6-inch pipe from Jefferson to 2d street.
- 184 feet 3-inch pipe from 5th street east.
- 216 feet 4-inch pipe from 9th street east, (M.)

## DUVAL STREET.

- 834 feet 4-inch pipe from Adams to 1st street.
- 327 feet 4-inch pipe from 2d to 3d street.
- 330 feet 4-inch pipe from 5th to 6th street.

## BAKER STREET.

- 1,127 feet 4-inch pipe from west of St. John to 2d street.
- 162 feet 4-inch pipe from 3d street west.
- 661 feet 4-inch pipe from 4th to 6th street.

## CATHERINE STREET.

- 525 feet 4-inch pipe from Henry to Munford street.
- 100 feet 4-inch pipe from Henry street east

## HOWARD STREET.

400 feet 4-inch pipe from 2d street, (Almshouse.)

## ORANGE STREET.

146 feet 4-inch pipe from 1st street west.

## CROSS STREETS.

## RESERVOIR STREET.

2,140 feet 24-inch pipe from the Reservoir to Main street.

526 feet 8-inch pipe on Cherry street, north of Main street, to 6-inch pipe.

261 feet 6-inch pipe on Cherry street, from 8-inch pipe to Grove Avenue, north.

137 feet 6-inch pipe on Cherry, west—on Grove Avenue to Shafer street.

486 feet 6-inch pipe from Main to Cary on Cherry street.

## SHAHER STREET.

452 feet 6-inch pipe from Grove Avenue to Franklin street.

## MUNFORD STREET.

195 feet 3-inch pipe from Marshall street, north.

## PINE STREET.

2,192 feet 6-inch pipe from Cumberland to Holly street.

## BELVIDERE STREET.

372 feet 6-inch pipe from Holly to north of Rowe street.

354 feet 3-inch pipe from Main street north.

## HENRY STREET.

375 feet 3-inch pipe from Marshall to Clay street.

266 feet 4-inch pipe from Clay to Catherine street.

120 feet 4-inch pipe from Catherine street north.

## BROOK AVENUE.

2,004 feet 6-inch pipe from Clay street to Bacon's Quarter Branch.

## MADISON STREET.

297 feet 3-inch pipe from Marshall street north.

## JEFFERSON STREET.

- 412 feet 12-inch pipe from Main to Franklin street.
- 4,000 feet 12-inch pipe from Main and Jefferson streets to the Reservoir.
- 4,000 feet 10-inch pipe from Main and Jefferson streets to the Reservoir.
- 412 feet 8 inch pipe from Franklin to Grace street.

## ADAMS STREET.

- 778 feet 12-inch pipe from Franklin to Broad street.
- 1,275 feet 4-inch pipe from Broad to Leigh street.
- 600 feet 4-inch pipe from Leigh to Duval street.

## FOUSHEE STREET.

- 107 feet 3-inch pipe from Franklin street south.
- 244 feet 1½-inch pipe from Main street north, under east sidewalk.
- 300 feet 1½-inch pipe from Grace street south.
- 150 feet 1½-inch pipe from Grace street north.
- 337 feet 4-inch pipe from Duval to Baker street.
- 283 feet 4-inch pipe from Baker street north.

## FIRST STREET.

- 85 feet 4-inch pipe from Canal street south.
- 825 feet 4-inch pipe from Canal to Main street.
- 2,287 feet 10-inch pipe from Main to Jackson street.
- 254 feet 4-inch pipe from Baker street south.
- 1,585 feet 4-inch pipe from Baker to Orange street.

## SECOND STREET.

- 300 feet 1½-inch pipe from Canal street south.
- 825 feet 4-inch pipe from Canal to Main street.
- 375 feet 6-inch pipe from Franklin to Main street.
- 200 feet 6-inch pipe from Franklin street north.
- 3,900 feet 4-inch pipe from Broad to Howard street.

## THIRD STREET.

- 320 feet 2-inch pipe from Byrd street south.
- 825 feet 4-inch pipe from Byrd to Cary street.
- 1,575 feet 16-inch pipe from Cary to Broad street.
- 412 feet 6-inch pipe from Broad to Marshall street.
- 400 feet 1½-inch pipe from Leigh street south.
- 1,350 feet 4-inch pipe from Leigh to Baker street.

## FOURTH STREET.

- 1,200 feet 4-inch pipe from Arch to Cary street.
- 390 feet  $1\frac{1}{2}$ -inch pipe from Main to Cary street.
- 200 feet  $1\frac{1}{2}$ -inch pipe from Main street north.
- 221 feet 6-inch pipe from Franklin street south.
- 375 feet 6-inch pipe from Franklin to Grace street.
- 380 feet  $1\frac{1}{2}$ -inch pipe from Broad to Grace street.
- 250 feet  $1\frac{1}{2}$ -inch pipe from Broad street north.
- 80 feet 4-inch pipe from Marshall street south.
- 2,250 feet 4-inch pipe from Marshall to Baker street.

## FIFTH STREET.

- 260 feet 3-inch pipe from Byrd street south.
- 400 feet 3-inch pipe from Byrd to Canal street.
- 412 feet 3-inch pipe from Cary to Canal street.
- 412 feet 4-inch pipe from Cary to Main street.
- 1,200 feet 6-inch pipe from Main to Broad street.
- 380 feet  $1\frac{1}{2}$ -inch pipe from Broad to Marshall street.
- 900 feet 4-inch pipe from Leigh to Marshall street.
- 622 feet 4-inch pipe from Leigh street north.
- 450 feet 4-inch pipe from Baker street south.
- 165 feet 4-inch pipe from Baker street north.

## SIXTH STREET.

- 288 feet 4-inch pipe from Byrd street south.
- 180 feet 3-inch pipe from Canal street south.
- 400 feet 4-inch pipe from Canal to Cary street.
- 258 feet  $1\frac{1}{2}$ -inch pipe from Main street south.
- 780 feet  $1\frac{1}{2}$ -inch pipe from Main to Grace street.
- 412 feet 4-inch pipe from Broad to Grace street.
- 337 feet 4-inch pipe from 6th to 7th street in Pink Alley.
- 150 feet 4-inch pipe from Pink Alley east.
- 1,350 feet 3-inch pipe from Broad to Leigh street.
- 200 feet 3-inch pipe from vegetable market and Fish Alley.
- 69 feet 3-inch pipe from Fish Alley, for fire plug.
- 528 feet  $1\frac{1}{2}$ -inch pipe from Leigh street north.
- 304 feet 4-inch pipe from Baker street south.

## SEVENTH STREET.

- 675 feet 3-inch pipe from Byrd to Tredegar street.
- 300 feet 4-inch pipe from Byrd to J. R. & K. Canal.
- 900 feet 6-inch pipe from Main to J. R. & K. Canal.

- 866 feet 4-inch pipe from Main to Grace street.
- 412 feet 6-inch pipe from Broad to Grace street.
- 1,300 feet 12-inch pipe from Broad to Leigh street.
- 574 feet 6-inch pipe from Leigh street north.

## EIGHTH STREET.

- 375 feet 4-inch pipe from Byrd to Arch street.
- 95 feet 3-inch pipe from Arch to R. R. bridge.
- 247 feet 3-inch pipe from Cary street north.
- 155 feet 6-inch pipe from Main street south.
- 158 feet 3-inch pipe from 8th street, east in alley Main and Cary streets.
- 180 feet 1½-inch pipe from Main street south, east side.
- 390 feet 1½-inch pipe from Main to Franklin street.
- 200 feet 8-inch pipe from Grace street south.
- 1,350 feet 4-inch pipe from Broad to Leigh street.
- 40 feet 3-inch pipe from between Clay and Leigh streets, for waste.
- 726 feet 4-inch pipe from Leigh street north.

## NINTH STREET.

- 429 feet 4-inch pipe from Byrd street south.
- 367 feet 3-inch pipe from Byrd street north.
- 412 feet 4-inch pipe from Main to Cary street.
- 1,200 feet 6-inch pipe from Main to Broad street.
- 340 feet 2-inch pipe from Broad to Marshall street.
- 186 feet 1½-inch pipe from Marshall street north.
- 214 feet 6-inch pipe from Clay street south.
- 159 feet 4-inch pipe from Leigh street south.
- 900 feet 4-inch pipe from Leigh to Abigail street.
- 150 feet 1½-inch pipe from 9th street east on Abigail street.

## TENTH STREET.

- 362 feet 1½-inch pipe from Byrd street south.
- 225 feet 4-inch pipe from Canal street south.
- 198 feet 6-inch pipe from Main street south.
- 216 feet 4-inch pipe from Main street north.
- 224 feet 3-inch pipe from 9th street east to fountain in the Capitol Square.
- 180 feet 4-inch pipe from Broad street south.
- 766 feet 4-inch pipe from Broad to Clay street.
- 375 feet 4-inch pipe from Leigh to Jackson street, (M.)

## ELEVENTH STREET.

- 403 feet 4-inch pipe from Main to Cary street.
- 266 feet 4-inch pipe from Main to Bank street.

- 375 feet 4-inch pipe from Marshall to Clay street.  
 167 feet 1½-inch pipe from 10th in alley between Canal and Byrd.  
 140 feet 1½-inch pipe from 10th north of Clay street.

#### TWELFTH STREET.

- 412 feet 4-inch pipe from Cary to Canal street.  
 412 feet 3-inch pipe from Cary to Main north.  
 330 feet 1½-inch pipe from Main street north.  
 250 feet 4-inch pipe from Broad to Capitol street.  
 766 feet 3-inch pipe from Broad to Clay street.  
 264 feet 3-inch pipe from Clay street north.  
 182 feet 3-inch pipe from Bank street to fountain in the Capitol Square.

#### GOVERNOR STREET.

- 550 feet 4-inch pipe from Capitol to Franklin street.

#### THIRTEENTH STREET.

- 412 feet 4-inch pipe from Cary to Canal street.  
 334 feet 3 inch pipe from 13th south—Shockoe Slip.  
 412 feet 4-inch pipe from Cary to Main street.  
 412 feet 4-inch pipe from Franklin to Main street.  
 393 feet 1½ inch pipe in Tobacco Alley, from 13th to 14th streets.

#### FOURTEENTH STREET.

- 375 feet 3-inch pipe from Cary street south, to Mill Alley.  
 375 feet, 1½ inch pipe from Cary, along Virginia, south.  
 450 feet 3-inch pipe from Cary to Main street.  
 218 feet 3 and 4-inch pipe from Main street north.  
 375 feet 6-inch pipe from Franklin to Ross street.  
 480 feet 1½-inch pipe from Truheart Alley, east of 14th street.  
 243 feet 3-inch pipe from 14th street west, in Exchange Alley.

#### COLLEGE STREET.

- 300 feet 4-inch pipe from Broad street north.  
 210 feet 1½-inch pipe from fire plug north.

#### NEW STREET.

- 166 feet 4-inch pipe from Franklin street south.

#### MAYO STREET.

- 1,200 feet 3-inch pipe from Broad to Main street.

## JAIL ALLEY.

412 feet 4-inch pipe from Broad to Marshall street,

## FIFTEENTH STREET.

- 1,200 feet 3-inch pipe from Franklin to Dock street,
- 395 feet 3-inch pipe from Franklin north, in alley.
- 375 feet 4-inch pipe from Marshall north, to creek.
- 390 feet 3-inch pipe from 15th street east, in Creek Alley.
- 121 feet 1½-inch pipe from Creek Alley south, in Spruce Alley.
- 254 feet 1½-inch pipe from 15th street west, in alley bet. Main and Cary,
- 70 feet 3-inch pipe from Cary street in J. W. Cardwell's foundry.

## SIXTEENTH STREET.

- 207 feet 3-inch pipe from Marshall to C. & O. Railroad tank.
- 198 feet 3-inch pipe from Cary street into Talbott & Sons' foundry,

## SEVENTEENTH STREET.

- 320 feet 1½-inch pipe from Cary to Dock street.
- 254 feet 1½-inch pipe from Main street south,
- 2,250 feet 4-inch pipe from Main to Venable street,
- 3,770 feet 4-inch pipe from Valley to C. & O. Railroad shops,
- 96 feet 1½-inch pipe from 17th street west, in Creek Alley.
- 80 feet 1½-inch pipe from 17th street east, in Walnut Alley.
- 160 feet 1½-inch pipe from Franklin south, on west 17th to Walnut Alley.
- 75 feet 1½-inch pipe from Franklin south, between 17th and 18th streets,
- 390 feet 3-inch pipe from Franklin to Grace on west 17th street.
- 62 feet 3-inch pipe from Cary street into Talbott & Sons' foundry,

## EIGHTEENTH STREET.

- 200 feet 1½-inch pipe from Cary to Dock street,
- 400 feet 3-inch pipe from Cary to Main street.
- 310 feet 3-inch pipe from Franklin street south,
- 2,035 feet 4-inch pipe from Franklin to Venable street,

## NINETEENTH STREET.

- 800 feet 6-inch pipe from Cary to Franklin street,
- 766 feet 4-inch pipe from Franklin to Broad street,
- 99 feet 3-inch pipe from 19th street into J. H. Grant's factory,
- 603 feet 4-inch pipe from Broad street north.

## TWENTIETH STREET.

- 400 feet 6-inch pipe from Main to Franklin street.
- 350 feet 1½-inch pipe from Franklin street north.
- 375 feet 6-inch pipe from Broad street south,

# TWENTY-FIRST STREET.

400 feet 3-inch pipe from Main to Cary street.  
 412 feet 4-inch pipe from Main to Franklin street.  
 243 feet 4-inch pipe from Franklin street north.

# TWENTY-SECOND STREET.

766 feet 4-inch pipe from Main to Broad street.

# TWENTY-THIRD STREET.

290 feet 1½-inch pipe from Main street north.  
 333 feet 6-inch pipe from Broad street north.

# TWENTY-FOURTH STREET.

412 feet 4-inch pipe from Franklin to Main street.  
 99 feet 3-inch pipe from Main street in Childrey's factory

# TWENTY-FIFTH STREET.

375 feet 6-inch pipe from Main to Cary street.  
 400 feet 3-inch pipe from Main to Franklin street.  
 375 feet 4-inch pipe from Grace to Franklin street.

# TWENTY-SEVENTH STREET.

375 feet 8-inch pipe from Broad to Grace street.

# TWENTY-EIGHTH STREET.

375 feet 4-inch pipe from Grace to Franklin street.

# TWENTY-NINTH STREET.

300 feet 4-inch pipe from Franklin street south.

# ELM STREET.

159 feet 1½-inch pipe from Bloody Run to R. R. bridge.  
 162 feet 3-inch pipe from R. R. bridge south.

# ASH STREET.

300 feet 2-inch pipe from Main street south.

## LOCATION OF FIRE PLUGS AND PIPE CONNECTIONS.

Those marked "x," are Cross Street Mains.

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1 Tredegar Foundry .....	3-inch.	
2 Holly and Church streets .....	4	x
3 Holly and Pine streete .....	6	x
4 Spring and Pine streets .....	6	x
5 Belvidere and Rowe streets .....	6	x
6 Howard and Rowe streets .....	4	
7 Armory Iron Works .....	3	
8 Centre and 6th streets .....	4	x
9 Arch and 7th streets .....	3	x
10 Arch and 8th streets .....	3	
11 Arch and 9th streets .....	4	x
12 Albemarle and Pine streets .....	6	x
13 Church and Maiden Lane .....	4	x
14 Arch and 4th streets .....	4	x
15 Beverly and Cherry streets .....	12	x
16 Beverly and Pine streets .....	6	x
17 Virginia Penitentiary .....	6	
18 Do. ....	6	
19 Do. ....	4	
20 Byrd and 4th streets .....	4	x
21 Byrd and 5th streets .....	4	x
22 Byrd and 7th streets .....	4	x
23 Byrd and 8th streets .....	4	
24 Byrd and 9th streets .....	4	
25 Byrd and 12th streets .....	4	x
26 Cumberland and Pine streets .....	12	x
27 Canal and 1st streets .....	4	x
28 Canal and 2d streets .....	4	
29 Canal and 3d streets .....	4	x
30 Canal and 4th streets .....	4	x
31 Canal and 6th streets .....	3	
32 Canal and 7th streets .....	6	x
33 Canal and 9th streets .....	3	x
34 Canal and 10th streets .....	4	x
35 City Gas Works .....	3	

36 Cary and Cherry streets.....	6	
37 Cary and Adams streets.....	6	
38 Cary and Foushee streets.....	6	
39 Cary and 1st streets.....	4	x
40 Cary and 2d streets.....	4	x
41 Cary and 3d streets.....	16	x
42 Cary and 4th streets.....	6	x
43 Cary and 5th streets.....	3	x
44 Cary and 6th streets.....	4	x
45 Cary and 7th streets.....	6	x
46 Cary and 8th streets.....	6	x
47 Cary and 9th streets.....	4	x
48 Cary and 11th streets.....	4	x
49 Cary and 12th streets.....	4	
50 Cary and 13th streets.....	4	x
51 Cary and 14th streets.....	6	x
52 Cary and 15th streets.....	3	x
53 Cary and 16th streets.....	3	
54 Cary and 17th streets.....	6	x
55 Cary and 18th streets.....	6	x
56 Cary and 19th streets.....	6	x
57 Cary and 20th streets.....	6	x
58 Cary and 21st streets.....	3	
59 Cary and 22d streets.....	6	x
60 Water and Ash streets.....	2	x
61 Main and Reservoir streets.....	24	
62 Main and Cherry streets.....	24	
63 Main and Pine streets.....	24	
64 Cary and 25th streets.....	6	
65 Main and 2d streets.....	6	
66 Main and 4th streets.....	6	
67 Main and 6th streets.....	6	
68 Main and 7th streets.....	6	x
69 Main and 8th streets.....	6	
70 Main and 10th streets.....	6	
71 Main and 12th streets.....	6	
72 Main and 13th streets.....	6	
73 Main and Cary and 10th streets.....	6	x
74 Main and 14th streets.....	4	
75 Main and Cary and 14th streets.....	3	x
76 Main, below 14th street.....	4	
77 Main, below 15th street.....	4	
78 Main and Cary and 15th streets.....	3	x
79 Main and 17th streets.....	4	

80 Main and 18th streets.....	4	x
81 Main and 20th streets.....	3	
82 Main and 21st streets.....	4	x
83 Main and 24th streets.....	8	
84 Main and 25th streets.....	8	
85 Main and 26th streets.....	8	
86 Main and 27th streets.....	8	
87 Main and Pear streets.....	6	
88 Main and Bloody Run streets.....	6	
89 Rocketts and Ash streets.....	6	
90 Bloody Run and Elm streets.....	4	
91 City Gas Works.....	3	
92 Franklin and Shafer streets.....	6	
93 Franklin and Laurel streets.....	6	
94 Franklin and Belvidere streets.....	6	
95 Franklin and Monroe streets.....	6	
96 Franklin and Jefferson streets.....	6	
97 Franklin and Adams streets.....	12	
98 Franklin and 1st streets.....	10	
99 Franklin and 3d streets.....	16	
100 Franklin and 4th streets.....	6	x
101 Franklin and 5th streets.....	6	x
102 Franklin and 7th streets.....	4	x
103 Franklin and 8th streets.....	6	
104 Franklin and 9th streets.....	6	x
105 Bank and 11th streets.....	4	x
106 Franklin and 13th streets.....	4	
107 Franklin and 14th streets.....	6	x
108 Franklin and 15th streets.....	4	
109 Franklin and 17th streets.....	4	x
110 Franklin and 18th streets.....	4	
111 Franklin and 19th streets.....	4	
112 Franklin and 23d streets.....	4	
113 Franklin and 25th streets.....	4	x
114 Franklin and 27th streets.....	4	
115 Franklin and 28th streets.....	4	x
116 Main and 29th streets.....	4	x
117 Grace and Laurel streets.....	6	
118 Grace and Pine streets.....	6	
119 Grace and Henry streets.....	6	
120 Grace and Madison streets.....	6	
121 Grace and Jefferson streets.....	8	x
122 Grace and Adams streets.....	6	
123 Grace and Foushee streets.....	4	

124	Grace and 2d streets .....	6	
125	Grace and 4th streets .....	6	
126	Grace and 6th streets .....	4	
127	Grace and 7th streets .....	6	
128	Grace and 28th streets .....	4	
129	State Capitol, west .....	4	
130	State Capitol, south .....	4	
131	State Capitol, east .....	4	
132	Governor, above Ross street .....	6	x
133	Ross and 14th streets .....	6	
134	Ross and Mayo streets .....	3	x
135	Grace and 17th streets .....	4	
136	Grace and 18th streets .....	4	x
137	Grace and 22d streets .....	4	
138	Grace and 25th streets .....	4	
139	Grace and 27th streets .....	4	
140	Grace and 28th streets .....	4	
141	Broad and Graham streets .....	6	
142	Broad and Shafer streets .....	6	
143	Broad and Munford streets .....	6	
144	Broad and Henry streets .....	6	
145	Broad and Madison streets .....	6	
146	Broad and Adams streets .....	6	
147	Broad and 1st streets .....	10	x
148	Broad and 3d streets .....	16	
149	Broad and 5th streets .....	6	x
150	Broad and 7th streets .....	6	
151	Broad and 8th streets .....	16	
152	Broad and 9th streets .....	6	x
153	Broad and 10th streets .....	16	
154	Broad and 11th streets .....	4	
155	Broad, east of 12th street .....	4	
156	Broad and Jail Alley .....	8	
157	Broad and Union streets .....	8	
158	Broad and 18th streets .....	4	x
159	Broad and 19th streets .....	4	x
160	Broad and 20th streets .....	6	x
161	Broad and 23d streets .....	8	
162	Broad and 25th streets .....	8	
163	Broad and 27th streets .....	8	
164	Marshall and Graham streets .....	6	
165	Marshall and Gilmer streets .....	6	
166	Marshall and Munford streets .....	6	
167	Marshall and Henry streets .....	6	

168 Marshall and Monroe streets.....		
169 Marshall and Jefferson streets.....	4	
170 Marshall and Adams streets.....	4	
171 Marshall and 2d streets.....	4	
172 Marshall and 3d streets.....	6	
173 Marshall and 4th streets.....	6	
174 Marshall and 5th streets.....	6	
175 Marshall and 6th streets.....	3	
176 Marshall, Second Meat Market.....	4	x
177 Marshall, Fish Market.....	3	x
178 Marshall and 8th streets.....	4	x
179 Marshall and 10th streets.....	4	x
180 Marshall and 11th streets.....	6	
181 Marshall and 12th streets.....	6	
182 Marshall, south College street.....	4	x
183 Marshall and 15th streets.....	4	
184 Marshall, City Jail.....	4	
185 Marshall and Union streets.....	4	
186 Marshall and 17th streets.....	4	x
187 Marshall and 18th streets.....	4	x
188 Marshall and 19th streets.....	4	x

## CLAY STREET.

189 Clay and Kenny streets.....	6	
190 Clay and Harrison streets.....	6	
191 Clay and Pine streets.....	6	
192 Clay and Gilmer streets.....	6	
193 Clay and Smith streets.....	6	
194 Clay and Monroe streets.....	6	
195 Clay and Brook Avenue.....	4	
196 Clay and Adams streets.....	4	x
197 Clay and 1st streets.....	10	x
198 Clay and 2d streets.....	4	x
199 Clay and 4th streets.....	4	x
200 Clay and 5th streets.....	4	x
201 Clay and 6th streets.....	3	x
202 Clay and 7th streets.....	12	x
203 Clay and 8th streets.....	6	x
204 Clay and 10th streets.....	3	
205 Clay and 12th streets.....	3	
206 Clay and 18th streets.....	4	
207 Catherine and Smith streets.....	4	
208 Henry, north Catherine street.....	4	x

209 Brook Avenue, between Clay and Leigh streets.....	6	x
210 Leigh street and Brook Avenue.....	6	
211 Leigh and Jefferson streets.....	6	
212 Leigh and Foushee streets.....	6	
213 Leigh and Adams streets.....	6	
214 Leigh and 1st streets.....	6	
215 Leigh and 2d streets.....	4	x
216 Leigh and 4th streets.....	4	x
217 Leigh and 6th streets.....	3	
218 Leigh and 7th streets.....	12	x
219 Leigh and 8th streets.....	6	
220 Leigh, north 7th street.....	6	x
221 Leigh, north 8th street.....	4	x
222 Leigh, north 9th street, (M.).....	4	x
223 Leigh, north 9th street.....	4	x
224 Leigh, north 10th street, (M.).....	4	x
225 Venable and 17th streets.....	4	x
226 Venable and 18th streets.....	4	
227 Valley and Cedar streets.....	4	x
228 Valley and Richardson streets.....	4	x
229 Valley and Washington streets.....	4	x
230 Valley and Randolph streets.....	4	x
231 Valley and Lownes streets.....	4	x
232 Valley and C. & O. Railroad shops.....	4	x
233 Jackson and Jefferson streets.....	6	
234 Jackson and Adams streets.....	6	
235 Jackson and Foushee streets.....	6	
236 Jackson and 3d streets.....	4	x
237 Duval street and Brook Avenue.....	6	x
238 Leigh and Munford streets.....	6	
239 Baker street and Brook Avenue.....	6	x
240 Brook Avenue and Moore street.....	6	x
241 Duval and Clark streets.....	4	
242 Duval and 2d streets.....	4	x
243 Duval and 3d streets.....	4	x
244 Duval and 4th streets.....	4	x
245 Baker and St. John streets.....	4	
246 Baker and St. James streets.....	4	
247 Baker and 3d streets.....	4	x
248 Baker and 5th streets.....	4	x
249 Charity and 2d streets.....	4	x
250 Federal and 1st streets.....	4	x
251 Coutts and 1st streets.....	4	x

252	Coutts and 2d streets.....	4	x
253	Orange and 1st streets.....	4	
254	City Almshouse.....	4	
255	City Almshouse....,.....	4	

## SIZE AND LOCATION

### *Of all the Stop-Cocks in the Street Mains.*

#### HOLLY STREET.

No. 1, Holly, east of Pine street.....	6 inch.
2, Holly, east of Belvidere street.....	4

#### ROWE STREET.

3, Rowe, south Belvidere street.....	6
4, Rowe, east Belvidere street.....	4
5, Rowe, south Church street.....	4
6, Rowe, north Church street.....	4

#### CHINA STREET.

7, China, south Belvidere street.....	6
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#### CANAL BANK.

8, Canal Bank, east of Armory.....	4
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#### ARCH STREET.

9, Arch, west 7th street.....	3
10, Arch, east 7th street.....	3

#### ALBEMARLE STREET.

11, Albemarle, south Pine street.....	6
12, Albemarle, east Pine street.....	6
13, Albemarle, east Belvidere street.....	6
14, Inside Penitentiary.....	6
15, Inside Penitentiary.....	4

#### BEVERLY STREET.

16, Beverly, north Pine street.....	6
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## BYRD STREET.

17, Byrd, north 3d street.....	4
18, Byrd, north 4th street.....	4
19, Byrd, west 7th street.....	4
20, Byrd, north 7th street.....	4
21, Byrd, south 7th street.....	3
22, Byrd, south 8th street.....	4
23, Byrd, south 9th street.....	4
24, Byrd, north 9th street.....	3
25, Byrd, south 10th street.....	1½
26, Byrd, south 12th street.....	4
27, Byrd, south 6th street.....	4
28, Byrd, south, opposite mills.....	3
29, Byrd, south, opposite mills.....	3

## CANAL STREET.

30, Canal, north 1st street.....	4
31, Canal, west 1st street.....	4
32, Canal, north 2d street.....	4
33, Canal, west 3d street.....	4
34, Canal, north 5th street.....	3
35, Canal, west 5th street.....	1½
36, Canal, north 6th street.....	4
37, Canal, south 6th street.....	3
38, Canal, east 6th street.....	3
39, Canal, north 15th and 16th streets.....	3

## CARY STREET.

40, Cary, east Cherry street.....	6
41, Cary, east Adams street.....	6
42, Cary, west 1st street.....	6
43, Cary, east 1st street.....	4
44, Cary, east 2d street.....	4
45, Cary, south 3d street.....	4
46, Cary, north 3d street.....	16
47, Cary, east 3d street.....	6
48, Cary, south 4th street.....	4
49, Cary, west 5th street.....	1½
50, Cary, east 5th street.....	1½
51, Cary, east 7th street.....	6
52, Cary, south 8th street.....	4

53, Cary, west 9th street.....	6
54, Cary, north 9th street.....	4
55, Cary, east 9th street.....	3
56, Cary, north 11th street.....	4
57, Cary, west 11th street.....	3
58, Cary, south 12th street.....	4
59, Cary, north 12th street.....	1½
60, Cary, west 13th street.....	3
61, Cary, north 13th street.....	4
62, Cary, south 13th street.....	4
63, Cary, east 13th street.....	3
64, Cary, south Virginia street.....	1½
65, Cary, north 14th street.....	3
66, Cary, south 14th street.....	3
67, Cary, north 15th street.....	3
68, Cary, south 15th street.....	3
69, Cary, east 15th street.....	3
70, Cary, south 17th street.....	1½
71, Cary, west 18th street.....	3
72, Cary, north 18th street.....	6
73, Cary, centre 18th street.....	6
74, Cary, south 18th street.....	1½
75, Cary, centre 19th street.....	6
76, Cary, north 19th street.....	6
77, Cary, east 19th street.....	12
78, Cary, east 19th street.....	3
79, Cary, north 20th street.....	6
80, Cary, centre 20th street.....	6
81, Cary, north 21st street.....	6
82, Cary, centre 21st street.....	6
83, Cary, north 22d street.....	6
84, Cary, east 22d street.....	12
85, Cary, centre 22d street.....	6
86, Cary, south 22d, street (waste).....	6

## MAIN STREET.

87, Main, east Reservoir street.....	24
88, Main, south Cherry street.....	6
89, Main, north Cherry street.....	8
90, Main, north Monroe Square.....	3
91, Main, north Belvidere street.....	3
92, Main, north Madison street (waste).....	8
93, Main, south Jefferson street.....	12

94, Main, centre Jefferson street.....	12
95, Main, west Jefferson street.....	24
96, Main, south Foushee street.....	1½
97, Main, west 1st street.....	10
98, Main, south 1st street.....	4
99, Main, north 1st street.....	10
100, Main, south 1st street.....	6
101, Main, centre 1st street.....	10
102, Main, north 2d street.....	4
103, Main, south 2d street.....	4
104, Main, south 3d street.....	6
105, Main, west 3d street.....	6
106, Main, west 3d street.....	24
107, Main, south 4th street.....	1½
108, Main, north 4th street.....	1½
109, Main, south 5th street.....	3
110, Main, north 5th street.....	6
111, Main, west 5th street.....	6
112, Main, east 5th street.....	6
113, Main, south 6th street.....	1½
114, Main, north 6th street.....	1½
115, Main, north 7th street.....	4
116, Main, south 7th street.....	6
117, Main, east 7th street.....	6
118, Main, south 8th street.....	6
119, Main, north 8th street.....	1½
120, Main, north 9th street.....	6
121, Main, south 9th street.....	4
122, Main, east 9th street.....	6
123, Main, west 9th street.....	6
124, Main, south 10th street.....	6
125, Main, north 10th street.....	4
126, Main, south 11th street.....	4
127, Main, north 11th street.....	4
128, Main, north 12th street.....	1½
129, Main, south 12th street.....	3
130, Main, south 13th street.....	4
131, Main, north 13th street.....	4
132, Main, west 13th street.....	6
133, Main, east 13th street.....	4
134, Main, north 14th street.....	4
135, Main, south 14th street.....	3
136, Main, east 14th street.....	4
137, Main, north 15th street.....	3

138, Main, south 15th street.....	3
139, Main, west 15th street.....	4
140, Main, north 17th street.....	4
141, Main, south 17th street.....	1½
142, Main, south 18th street.....	4
143, Main, west 18th street.....	4
144, Main, north 19th street.....	1½
145, Main and Cary, west 14th street (alley).....	3
146, Main and Cary, east 14th street (alley).....	3
147, Main, north 20th street.....	6
148, Main, east 20th street.....	3
149, Main, north 21st street.....	4
150, Main, south 21st street.....	3
151, Main, north 22d street.....	4
152, Main, west 23d street.....	3
153, Main, north 23d street.....	1½
154, Main, west 24th street.....	8
155, Main, north 25th street.....	3
156, Main, south 25th street.....	6
157, Main, east 26th street.....	8
158, Main, east Pear street.....	6
159, Rocketts, east Bloody Run.....	6
160, Rocketts, north Bloody Run.....	4
161, Rocketts, east Ash street.....	6
162, Rocketts, south Ash street.....	3
163, Bloody Run, east Ash street.....	4
164, City Gas Works.....	3

## FRANKLIN STREET.

165, Franklin, east Shafer street.....	6
166, Franklin, south Laurel street.....	6
167, Franklin, east Laurel street.....	6
168, Franklin, east Henry street.....	6
169, Franklin, east Jefferson street.....	6
170, Franklin, north Jefferson street.....	8
171, Franklin, north Adams street.....	12
172, Franklin, south Foushee street.....	3
173, Franklin, west 1st street.....	12
174, Franklin, east 1st street.....	12
175, Franklin, north 2d street.....	6
176, Franklin, south 2d street.....	6
177, Franklin, west 3d street.....	12
178, Franklin, south 3d street.....	16

179, Franklin, east 3d street.....	12
180, Franklin, north 3d street.....	16
181, Franklin, north 4th street.....	6
182, Franklin, south 4th street.....	6
183, Franklin, north 5th street.....	6
184, Franklin, east 6th street.....	6
185, Franklin, south 8th street.....	1½
186, Franklin, west 9th street.....	6
187, Franklin, east 9th street.....	3
188, Bank, east 9th street.....	1½
189, Bank, north, between 11th and 12th streets.....	3
190, Bank, west 12th street.....	3
191, Franklin, north 13th street.....	4
192, Franklin, east 13th street.....	4
193, Franklin, north 14th street.....	6
194, Franklin, east Mayo street.....	4
195, Franklin, south Mayo street.....	3
196, Franklin, north Mayo street.....	3
197, Franklin, north 15th street.....	3
198, Franklin, south 15th street.....	3
199, Franklin, north-west 17th street.....	3
200, Franklin, south 17th street.....	1½
201, Franklin, west 17th street.....	4
202, Franklin, north 17th street.....	4
203, Franklin, north 17th street..... (waste)	4
204, Franklin, west 18th street.....	4
205, Franklin, north 18th street.....	4
206, Franklin, south 18th street.....	3
207, Franklin, north 19th street.....	4
208, Franklin, south 19th street.....	1½
209, Franklin, west 20th street.....	4
210, Franklin, north 20th street.....	6
211, Franklin, north 21st street.....	4
212, Franklin, south 21st street.....	4
213, Franklin, north 22d street.....	4
214, Franklin, east 22d street.....	4
215, Franklin, south 24th street.....	4
216, Franklin, west 25th street.....	4
217, Franklin, east 25th street.....	4
218, Franklin, east 27th street.....	4
219, Franklin, north 28th street.....	4
220, Franklin, east 28th street.....	4

## GRACE STREET.

221, Grace, west Pine street.....	6
222, Grace, west Madison street.....	6
223, Grace, east Madison street.....	6
224, Grace, west Adams street.....	6
225, Grace, east Adams street.....	4
226, Grace, west 1st street.....	4
227, Grace, east 1st street.....	6
228, Grace, west 3d street.....	6
229, Grace, east 3d street.....	6
230, Grace, north 4th street.....	1½
231, Grace, east 5th street.....	6
232, Grace, west 5th street.....	6
233, Grace, north 6th street.....	4
234, Grace, south 7th street.....	4
235, Grace, west 8th street.....	4
236, Grace, east 9th street.....	6
237, Grace, west 9th street.....	4
238, Governor, north Ross street.....	6
239, Governor, east Ross street.....	6
240, Grace, south-west 17th street.....	3
241, Grace, west 17th street.....	4
242, Grace, east Henry street.....	6
243, Franklin, west Shafer street.....	6
244, Grace, west 17th street.....	4
245, Grace, east 18th street.....	3
246, Grace, west 19th street.....	3
247, Grace, west 22d street.....	3
248, Grace, east 22d street.....	4
249, Grace, west 25th street.....	4
250, Grace, south 25th street.....	4
251, Grace, west 27th street.....	4
252, Grace, east 27th street.....	4
253, Grace, south 28th street.....	4

## BROAD STREET.

254, Broad, east Munford street.....	6
255 Broad, west Madison street.....	6
256, Broad, west Adams street.....	6
257, Broad, north Adams street.....	4
258, Broad, south Adams street.....	12

259, Broad, north 1st street.....	10
260, Broad, south 1st street.....	10
261, Broad, west 1st street.....	6
262, Broad, east 1st street.....	6
263, Broad, north 2d street.....	4
264, Broad, north 3d street.....	6
265, Broad, centre 3d street.....	6
266, Broad, south 3d street.....	16
267, Broad, east 3d street.....	16
268, Broad, east 3d street.....	6
269, Broad, south 4th street.....	1½
270, Broad, north 4th street.....	1½
271, Broad, centre 4th street.....	4
272, Broad, south 5th street.....	6
273, Broad, west 5th street.....	6
274, Broad, east 5th street.....	6
275, Broad, north 5th street.....	1½
276, Broad, north 6th street.....	3
277, Broad, south 6th street.....	4
278, Broad, west 6th street.....	16
279, Broad, north 7th street.....	12
280, Broad, centre 7th street.....	12
281, Broad, south 7th street.....	6
282, Broad, north 8th street.....	4
283, Broad, north 9th street.....	3
284, Broad, south 9th street.....	6
285, Broad, west 9th street.....	16
286, Broad, west 9th street.....	6
287, Broad, east 9th street.....	16
288, Broad, east 9th street.....	4
289, Broad, centre 13th street.....	6
290, Broad, south 10th street.....	4
291, Broad, north 10th street.....	4
292, Broad, north 12th street.....	3
293, Broad, south 12th street.....	4
294, Broad, west 12th street.....	16
295, Broad, west 12th street.....	4
296, Broad, east 12th street.....	4
297, Broad, north College street.....	4
298, Broad, opposite African Church.....	4
299, Broad, west Mayo street.....	16
300, Broad, south Mayo street.....	3
301, Broad, east Mayo street.....	8
302, Broad, north Jail Alley.....	4

303, Broad, west 17th street.....	8
304, Broad, south 17th street.....	4
305, Broad, east 17th street.....	8
306, Broad, south 18th street.....	4
307, Broad, north 18th street.....	4
308, Broad, north 19th street.....	4
309, Broad, south 19th street.....	4
310, Broad, east 19th street.....	8
311, Broad, south 20th street.....	6
312, Broad, west 21st street.....	8
313, Broad, south 22d street.....	4
314, Broad, north 23d street.....	6
315, Broad, east 23d street.....	8
316, Broad, east 25th street.....	8
317, Broad, east 27th street.....	4
318, Broad, south 27th street.....	8

## MARSHALL STREET.

319, Marshall, west Munford street.....	6
320, Marshall, north Munford street.....	3
321, Marshall, west Monroe street.....	4
322, Marshall, south Madison street.....	3
323, Marshall, west Adams street.....	4
324, Marshall, east Adams street.....	6
325, Marshall, west 1st street.....	6
326, Marshall, east 1st street.....	6
327, Marshall, east 2d street.....	6
328, Marshall, west 4th street.....	6
329, Marshall, east 5th street.....	6
330, Marshall, north 5th street.....	4
331, Marshall, north 6th street.....	3
332, Marshall, east Pink Alley.....	4
333 Marshall, east 7th street.....	6
334, Marshall, west 7th street.....	6
335, Marshall, west Pink Alley.....	4
336, Marshall, north 8th street.....	4
337, Marshall, east 9th street.....	6
338, Marshall, east 10th street.....	6
339, Marshall, west 12th street.....	6
340, Marshall, east 12th street.....	3
341, Marshall, south College street.....	1½
342, Marshall, east Jail Alley.....	4
343, Marshall, south city Jail.....	6

344, Marshall, north Union street.....	3
345, Marshall, west 17th street.....	4
346, Marshall, east 17th street.....	4

## CLAY STREET.

347, Clay, between Hancock and Harrison streets (waste,.....)	6
348, Clay, west Hancock street.....	6
349, Clay, west Graham street.....	6
350, Clay, west Munford street.....	6
351, Clay, south Henry street.....	3
352, Clay, north Henry street.....	4
353, Catherine, west Henry street.....	4
354, Clay, south Monroe street.....	4
355, Clay, west Brook Avenue.....	6
356, Clay, south Adams street.....	4
357, Clay, west Foushee street.....	1½
358, Clay, west 1st street.....	6
359, Clay, east 1st street.....	6
360, Clay, north 1st street.....,.....	10
361, Clay, west 2d street.....	1½
362, Clay, east 2d street.....	3
363, Clay, south 4th street.....	4
364, Clay, east 4th street.....	6
365, Clay, west 6th street.....	6
366, Clay, east Marshall, 6th.....	3
367, Clay, east Fish Market.....	3
368, Clay, west 7th street.....	6
369, Clay, east 7th street.....	6
370, Clay and Leigh, 7th street (waste,).....	6
371, Clay, south 7th street.....	12
372, Clay, east 8th street.....	6
373, Clay, and Leigh, 8th street (waste,).....	3
374, Clay, west 10th street.....	6
375, Clay, south 10th street.....	4
376, Clay, north 10th street.....	1½
377, Clay, south 11th street.....	4
378, Clay, west 12th street.....	3
379, Clay, north 12th street.....	3
380, Clay, east 17th street.....	4
381, Clay, south 18th street.....	4

## LEIGH STREET.

382, Leigh, west Brook Avenue.....	6
383, Leigh, east Brook Avenue.....	6
384, Leigh, south Brook Avenue.....	6
385, Leigh, south Adams street.....	4
386, Leigh, west Adams street.....	6
387, Leigh, west 1st street.....	6
388, Leigh, north 2d street.....	4
389, Leigh, south 2d street.....	4
390, Leigh, east 2d street.....	4
391, Leigh, north 3d street.....	4
392, Leigh, south 3d street.....	1½
393, Leigh, north 4th street.....	4
394, Leigh, south 4th street.....	4
395, Leigh, North 5th street.....	4
396, Leigh, south 5th street.....	4
397, Leigh, east 6th street.....	3
398, Leigh, west 6th street.....	4
399, Leigh, north 6th street.....	1½
400, Leigh, west 7th street.....	6
401, Leigh, east 7th street.....	6
402, Leigh, north 7th street.....	6
403, Leigh, south 8th street.....	4
404, Leigh, north 8th street.....	4
405, Leigh, north 9th street.....	4
406, Leigh, south 9th street.....	4
407, Leigh, east 9th street.....	4
408, Leigh, north 10th street.....	4
409, M, east 9th street.....	4
410, Abigail, north 9th street (waste,).....	1½
411, Abigail, east 9th street.....	1½
412, Jackson, east Adams street.....	6
413, Jackson, north Adams street.....	4
414, Jackson, south 1st street.....	10
415, Jackson, west 2d street.....	6
416, Jackson, west 5th street.....	3
417, Duval, north Brook Avenue.....	6
418, Duval, north St. James street.....	4
419, Duval, east St. James street.....	4
420, Duval, centre 2d street (waste,).....	4
421, Duval, east 2d street.....	4
422, Duval, south 3d street.....	4

423, Duval, north 5th street.....	4
424, Baker, west St. James street.....	4
425, Baker, north St. James street.....	4
426, Baker, north 1st street.....	4
427, Baker, south 1st street.....	4
428, Baker, west 2d street.....	4
429, Baker, south 2d street.....	4
430, Baker, south 4th street.....	4
431, Baker, east 5th street.....	4
432, Federal, north 1st street.....	4
433, Federal and Coutts, Burying Ground.....	1½
434, Howard Almshouse.....	4
435, Byrd, south 8th street.....	4
436, Cary, north 25th street.....	6



ANNUAL REPORT

OF THE

COMMITTEE ON LIGHT,

AND

*The Superintendent*

OF THE

CITY GAS WORKS,

FOR THE

FISCAL YEAR ENDING JANUARY 31, 1873.



# ANNUAL REPORT.

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The Committee on Light herewith present to the City Council the Annual Report of the Superintendent of the Gas Works, accompanied by the usual tabular statements of the City Auditor.

From an examination of these documents, the following synopsis of the operations of the works, during the last fiscal year, is derived, viz :

	Bushels.
Quantity of coal consumed last year.....	290,589
Quantity of coal consumed previous year.....	277,213
Increased consumption of coal.....	13,376
Quantity of lime used last year.....	29,310
Quantity of lime used previous year.....	24,115
Increased consumption of lime.....	5,195
	Feet.
Quantity of gas made last year.....	74,547,500
Quantity of gas made previous year.....	67,196,900
Increased manufacture.....	7,350,600
Quantity of gas sold last year.....	66,832,791
Quantity of gas sold previous year.....	60,426,670
Increased consumption.....	6,406,121

Receipts last year.....	\$161,833 87
Receipts previous year.....	151,967 04
Increased receipts.....	<u>\$9,866 83</u>

Feet.

Gas consumed in street lamps and public buildings last year.....	15,192,869
Gas consumed previous year.....	<u>12,768,231</u>
Increased consumption.....	2,424,638

## RECAPITULATION OF RECEIPTS.

Excess of cash receipts over expenditures.....	\$15,831 35
To which must be added 15,192,869 feet of gas consumed by public buildings and street lamps, and 70,000 feet due by C. & O. Railroad Co., making a total of 15,262,869 feet, at \$3 per thousand.....	\$45,788 60
To which must also be added the revenue tax paid by city for public consumption—street lamps, &c. and ten per cent. for leakage and condensation.....	2,264 75    48,053 35
Total in favor of the works.....	<u>\$63,884 70</u>

For many years previous to the present management, with the view of making the receipts of the works greater, all the gas made and distributed as per station metre, was considered as accountable for, and charged, after deducting that which was paid for, to the public consumption. This was a deviation from all well-regulated gas establishments—the custom universally being not to allow less than ten per cent. for leakage and condensation.

The Committee are of opinion that it was not intended in the United States revenue law to charge gas works, which are the property of a city, with a tax on the gas used in their street lamps and public buildings, and lost by leakage and condensation, for which the works receive no income.

The sum total charged to account of gas works, to the close of the fiscal year, for buildings, extensions, &c., is far

in excess of the value of the works. This was plainly shown by the well informed Committee on Light of 1871. We subjoin an extract from that report, to which we call the attention of the Council. It is as follows :

“The works were first erected on ground in a crowded part of the city, where no additional land could be obtained, except at a very large price. This was soon found to be too small, and other works, entirely new, were erected where they should have been put at first. This included more expense than was at first incurred, and was increased by the expense attendant upon pulling down the old works, while the sale of the part of the ground vacated by the removal, was but a small return for the large amounts expended. This has also been increased by the extension of street mains, such as those made during the past year, thousands of dollars having been spent to realize not only no income, but to add to the losses.

“To place these works on a correct basis, it is desirable that a proper value should be put upon them by estimates made by competent persons, and this amount being assumed as the value of the works, all calculations of cost should be made upon this amount, and after that has been done, a careful distribution of the accounts, separating those chargeable to the construction from the current expenses, and at the end of each year a proper account could be rendered, and the people of Richmond, who are the owners of the works, be kept fully informed of the value of their property. Unless this is done, we must go on blundering, as hitherto, without giving satisfaction to anybody. We consider it the more necessary at this time, because of the large expenditures about to be made, and which, we may add, are rendered necessary by the short-sighted policy which has hitherto been pursued.”

The expenditures above indicated, have been made, and the Committee would recommend that the suggestions mentioned in the above extract be carried into effect.

For further information, the attention of the Council is requested to the accompanying statements and statistics of the Superintendent.

We have made a personal inspection of the entire works, and are pleased to report them in good order.

All of which is respectfully submitted.

JOHN M. HIGGINS,  
*Chairman Committee on Light.*

# Superintendent's Report.

## OFFICE CITY GAS WORKS,

RICHMOND, February, 1873.

*To the Committee on Light :*

GENTLEMEN—I have the honor to submit for your examination and consideration, my Annual Report of the operations at the City Gas Works and their results, during the fiscal year ending January 31st, 1873, being the twenty-second since their establishment, as follows :

### MANUFACTURING DEPARTMENT.

	Bushels.
Coal on hand at last annual report.....	25,370
Coal purchased from Clover Hill Railroad Company.....	118,856
Do. do. C. B. Lipscomb.....	42,516
Do. do. Albert Blair.....	40,586
Do. do. Newburgh Orrel Coal Company.....	51,343
Do. do. Robert Marks.....	13,145
Do. do. West & Lacy.....	547
Do. do. Cottrell & Reins.....	5,176
<hr/>	
Total coal on hand and purchased.....	297,539
Less coal on hand January 31st, 1873.....	6,550
Less coal used for pumping engine.....	400
<hr/>	
	6,950
<hr/>	
Coal carbonized during the year.....	290,589

	Bushels.
Lime on hand at last report .....	8,543
Lime burnt at Works .....	32,970
	<hr/>
Total on hand and burnt .....	41,513
Less on hand January 31st, 1873 .....	12,203
Lime used in purification .....	29,310
	<hr/>
	41,513
	<hr/>
	41,513

## COKE MADE AND DISPOSED OF AS FOLLOWS :

	Bushels.	Bushels.
Coke on hand January 31st, 1873 .....		10,500
Coke used in retort house .....	291,485	
Coke sold .....	73,404	
Coke used at station engine .....	5,850	
Coke used in other parts of the Works .....	6,000	
	<hr/>	376,739
		<hr/>
Total .....		387,239

## STATEMENT OF GAS MADE AND CONSUMED.

	Cubic feet.
Gas on hand January 31st, 1872 .....	275,176
Gas made as per Station Metre .....	74,547,500
From which deduct 10 per cent. for leakage and condensation .....	7,454,750
	<hr/>
	67,092,750
	<hr/>
Total .....	67,367,926
Less amount on hand January 31st, 1873 .....	535,135
	<hr/>
Amount consumed .....	66,832,791

## DISPOSED OF AS FOLLOWS :

Private consumption, as per Auditors's report :

First District .....	13,538,618
Second District .....	26,979,572
Third District .....	9,894,712
Fractional bills .....	1,157,020
	<hr/>
Total private consumption .....	51,569,922

## PUBLIC CONSUMPTION.

Street Lamps.....	14,090,069
City Almshouse.....	149,800
City Almshouse—Colored Department.....	52,700
City Jail.....	63,600
City Hall.....	156,300
City Stables.....	49,400
First Market and Station House.....	208,600
Second Market and Station House.....	100,500
Scale House.....	700
Public School Buildings and School Board.....	19,600
Fire Engine House, Company "A," and Office City Water Works....	60,000
Do. do. do. "B".....	61,400
Do. do. do. "C".....	58,700
Do. do. do. "D," and Third Station House.....	74,200
Do. do. do. 25th street.....	14,700
Council Chamber.....	15,200
Police Court, corner Franklin and Mayo streets.....	17,400
<hr/>	
Total Public Consumption.....	15,192,869
To which must be added 70,000 feet, caused by the breaking of the Street Main on 24th street, between Broad and Marshall, which the C. & O. R. R. Company have agreed to pay for.....	70,000
<hr/>	
Total Public Consumption, including C. & O. R. R. Company.....	15,262,869
Total Private Consumption, brought forward.....	51,569,922
Total Amount Gas consumed.....	66,832,791

By the above, it will be perceived there has been consumed for the use of the City, 15,192,869 feet of gas, free of charge. The statement of gas generated, shows that 74,547,500 cubic feet were made, being an increase on the previous year of 7,350,600 feet.

At the last report, there were one thousand and forty-six public lamps. During the year there have been added thirty-three—making, in all, one thousand and seventy-nine, located as follows :

In First District.....	328
In Second District.....	367
In Third District.....	339

In First Market House.....	15
In Second Market House.....	14
At the Upper Works.....	5
At the Lower Works.....	11

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Total..... 1,079

At the date of last report, Street Mains measured as follows: 39 miles, 658 feet.

Laid during the year.....	1	"	3396	"
---------------------------	---	---	------	---

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Total.....	40	"	4054	"
------------	----	---	------	---

For size and other particulars see Table "E."

The largest amount of gas made in any one twenty-four hours, was on the 31st January, 1873—amounting to 354,000 cubic feet.

The largest amount consumed in any one twenty-four hours was on the 24th December, 1872, which was 332,588 cubic feet.

*Size and Number of Metres in Use.*

DISTRICTS.	2 Lights.	3 Lights.	5 Lights.	10 Lights.	20 Lights.	30 Lights.	45 Lights.	60 Lights.	100 Lights.	Total.
First District.....	2	601	185	64	24	5	4	4	3	892
Second District.....	.....	586	424	213	80	6	6	2	.....	1317
Third District.....	1	402	304	73	12	3	1	.....	.....	796
	3	1589	913	350	116	14	11	6	3	3005

*Size and Number of Metres out of Use.*

DISTRICTS.	2 Lights.	3 Lights.	5 Lights.	10 Lights.	20 Lights.	30 Lights.	45 Lights.	60 Lights.	100 Lights.	Total.
First District .....	1	56	7	3	1	....	....	1	1	70
Second District .....	2	42	14	3	1	....	....	....	....	62
Third District .....	2	62	11	4	....	....	....	....	....	79
	5	160	32	10	2			1	1	211

*Size and Number of Metres put in for New Consumers.*

DISTRICTS.	2 Lights.	3 Lights.	5 Lights.	10 Lights.	20 Lights.	30 Lights.	45 Lights.	60 Lights.	100 Lights.	Total.
First District.....	....	29	6	3	3	1	....	....	....	42
Second District.....	....	19	26	....	3	1	....	....	....	49
Third District.....	....	31	16	2	....	....	....	....	....	49
		79	48	5	6	2				140

In the month of January, there was manufactured 8,630,000 cubic feet. Consumed in the same month, 8,449,386 cubic feet.

There are 211 metres out of use, as follows :

First District.....	70	
Second District.....	62	
Third District.....	79	
	<hr/>	
Total.....	211	
Metres in use February 1st, 1873.....	3,005	
Metres out of use February 1st, 1873.....	211	
	<hr/>	3,216
Metres in use February 1st, 1872.....	2,883	
Metres out of use February 1st, 1872.....	193	
	<hr/>	3,076
Increase for the year.....		140

The Auditor reports the receipts and disbursements on account of current expenses, as follows :

Received for coke, &c.....	\$8,785 89	
Received for gas.....	153,047 98	
	<hr/>	\$161,833 87
Paid for coal.....	52,950 75	
Paid for expenses.....	93,051 77	
	<hr/>	146,002 52
	<hr/>	
Excess of receipts over expenditures.....		\$15,831 35
To which must be added the number of feet of gas consumed by Street Lamps and Public Buildings, 15,192,869 feet, and 70,000 feet in addition, due by C. & O. R. R. Company, making a total of 15,262,869 feet at \$3 per thousand.....		45,788 60

The Works are also entitled to the following credits, which are included in the Auditor's report of Current Expenses :

Revenue tax paid on gas used in the City—the whole number of feet being 15,192,868, but as the tax ceased on 20th August, only half of that quantity will be calculated, viz : 7,596,434 feet, that being a fair average at 20 cents per thousand.....	\$1,519 28	
Gas lost by condensation and leakage, 745,475 feet.....	745 47	
	<hr/>	2,264 75
Total in favor of the Works.....		\$63,884 70

The Committee will please bear in mind that their predecessors, early in the year 1872, advanced the wages of the men fifty cents per day. This just and proper increase of pay to the employees, and the advance in the price of coal, together with the necessary increased labor and expense of getting the coal to the Works, during the prevalence of the epizootic, or horse malady, had the effect of greatly augmenting the current expenses of the year, and consequently reducing the profits.

The new holder, erected by Messrs. Wm. E. Tanner & Co., 100 feet in diameter by 52 feet high, and capable of containing 400,000 cubic feet of gas, we regard as a good job. We have had it in constant use since July last, and it works admirably, giving entire satisfaction.

The four new Purifiers, contracted for last year by the Messrs. Talbott & Sons, were completed by them in a very superior manner, and are now in use and working well.

The Works are possessed now with purifying and holding capacity—additions so long and much needed—which will be sufficient for many years. This will enable the Superintendent to successfully operate them with regularity and economy.

For amount of gas consumed by private consumers, in each month, refer to Table “A.”

For comparative statement of gas made and distributed, as compared with the fiscal years of 1871 and 1872, refer to Table “B.”

For amount received and disbursed monthly, on account of current expenses of the Works, refer to Table “C.”

For amount received and disbursed, on account of construction account, refer to Table “D.” The amount expended on account of “New Gas Holder” is also included in Table

“D.” There is also included in Table “D” the amount expended on account of “New Purifying House,” \$9,907 99.

The service pipes and street lamps, laid when gas was first introduced in the City, (twenty-two years ago,) are now in such a condition, caused by being rusted out in many places, as to require a speedy renewal. If they are allowed to remain in their present condition, the City will probably suffer considerable loss. In this connection, I think it proper to state that 167 service pipes were renewed last year in place of the old ones, and that 49 new lamps were put up in place of those broken and worn out. The same may be said with regard to the metres first set, many of which are in a very defective condition, and will have to be replaced with new ones. I will further add, that during last year, 130 new metres were substituted for old ones which were entirely worn out.

In conclusion, I have only to add, that I believe we have the Works in good condition, and have but one item of repairs to recommend, and that is a new slate roof on the old purifying house and metre room, the old roof being rusted out and in a dilapidated state.

It gives me great pleasure to state, that the officers and employees attend to their respective duties faithfully and diligently.

All of which is respectfully submitted.

JOHN H. KNOWLES,  
*Superintendent.*

## INVENTORY.

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### AMOUNT OF STOCK ON HAND AT OLD WORKS.

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Lamp posts.....	\$567 50
Cast iron pipes, fittings, &c.....	3,418 28
Metre and stop-cocks.....	323 00
Stop and drip boxes.....	100 00
Wrought iron pipe, fittings, &c.....	427 92
Brass unions and old brass.....	118 50
Service and street main tools.....	383 93
Pipe cutting machine and dies.....	100 00
Stocks and dies.....	25 00
Tool wagon.....	50 00
Street lamps.....	84 00
Lamp glass and burners.....	102 45
Gum hose.....	100 00
Lead, clay and lime.....	76 50
New metres.....	102 00
Old metres.....	2,129 50
Patent chain blocks, &c.....	800 00
Set tinsmith's tools.....	250 00
Platform scales.....	25 00
Experimental scales, metre provers, &c.....	165 00
Small gasometer, pressure gauges, &c.....	185 00
Boiler and steam gauge.....	350 00
Office furniture.....	328 00

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\$10,211 58

## AMOUNT OF STOCK ON HAND AT LOWER WORKS.

6,550 bushels coal.....	\$1,493 98
1,725 bushels oyster shells.....	73 31
12,203 bushels lime.....	1,220 30
50,000 bushels refused lime.....	1,500 00
Five clay retorts.....	375 00
Settings for retorts, fire-brick, &c., &c.....	5,250 00
Sundry mouth pieces, pipes, &c.....	1,360 00
Retort house tools, coke and coal barrows.....	1,600 00
Smith shop tools, punching machine and shears.....	530 00
Large and small scales and exhauster.....	1,375 00
Leather and gum hose, borings, lead, &c.....	275 00
Steam engine and exhaust governor.....	1,200 00
Two large pressure gauges.....	90 00
Wrought iron and steel.....	200 00
Two universal pulley blocks and chain.....	150 00
One dunkey engine and boiler.....	700 00
Office furniture.....	275 00
	<hr/>
	\$17,667 59
Amount of inventory from Old Works.....	10,211 58
	<hr/>
Total.....	\$27,879 17
To which must be added inventory of books, office furniture, &c., in the Inspector's office.....	300 00
	<hr/>
Total valuation.....	\$28,179 17

GAS INSPECTOR'S OFFICE,  
*Richmond, January, 1873.*

INVENTORY OF BOOKS, OFFICE FURNITURE, &c.

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Six New Metre Books.	Plans, Paper, &c.
Twelve New Working Books.	One Paper Weight.
One Change Metre Book.	Three Desks.
One Take Out Metre Book.	One Wardrobe.
One Rent Metre Book.	One Table.
One Prove Job Book.	Six Chairs.
One Order Book.	One Stove and Pipe.
One Paving Account Book.	One Water Cooler.
One Permit Book.	One Tumbler.
Three Inkstands, Mucilage, &c.	One Hat Rack.
Two Gutta Percha Rulers.	Five Pairs Pliers.
One Bill Holder.	Seven Gas Keys.
Two Slates and Sponge.	One Test Metre.
Three Paper Cutters.	One Dusting Brush.
One Copy City Ordinances, (new.)	Two Rugs.
One Copy City Ordinances, (old.)	Six Old Metre Books.

Valuation of the above, estimated..... \$300 00.

## A.

*Aggregate of Gas Bills rendered Consumers for the fiscal year, to January 31st, 1873.*

MONTHS.	1st District.	2d District.	3d District.
	Cubic Feet.	Cubic Feet.	Cubic Feet.
1872—February .....	1,280,200	2,861,700	1,220,266
March .....	1,147,000	2,303,300	969,300
April .....	1,034,233	2,388,518	966,400
May .....	921,650	1,927,706	770,766
June .....	808,200	1,528,633	666,933
July .....	636,033	1,327,500	573,566
August .....	768,133	1,293,400	419,966
September .....	779,933	1,420,133	431,266
October .....	1,393,266	2,334,300	688,566
November .....	1,553,950	3,036,316	919,600
December .....	1,421,387	3,051,666	1,154,383
1873—January .....	1,794,633	3,506,400	1,113,700
Totals .....	13,538,618	26,979,572	9,894,712

## COMPARATIVE.

DISTRICTS.	1871.	1872.
1st District .....	11,927,860	13,538,618
2d District .....	25,467,920	26,979,572
3d District .....	9,317,250	9,894,712
Fractional, 1st, 2d and 3d .....	945,590	1,157,020
Totals .....	47,658,620	51,569,922

Increased in 1872..... 3,911,302 Cubic Feet.

J. B. ROYSTER, *Auditor.*

AUDITOR'S OFFICE, Feb. 10th, 1873.

## B.

## COMPARATIVE STATEMENT

*Of Gas Made and Distributed, as compared with 1871 and 1872, showing the increase of consumption in each month in 1872, as compared with 1871 :*

MONTHS.	Gas made in 1871.	Gas consumed in 1871.	Gas made in 1872.	Gas consumed in 1872.	Increase.
February .....	6,180,500	6,137,898	6,304,200	6,318,445	180,547
March .....	5,892,700	5,896,544	6,221,100	6,225,841	329,297
April .....	4,903,600	4,982,063	5,449,600	5,458,862	476,799
May .....	4,544,400	4,461,453	4,786,600	4,789,257	327,804
June .....	3,732,350	3,732,096	4,258,600	4,276,958	544,862
July .....	3,657,850	3,751,038	4,244,900	4,284,621	533,583
August .....	3,955,800	3,926,669	4,685,900	4,527,514	600,845
September .....	4,849,200	4,991,060	5,998,700	5,892,919	1,001,859
October .....	6,650,000	6,578,120	7,686,100	7,783,845	1,205,725
November .....	7,538,300	7,551,760	7,791,800	7,894,311	342,551
December .....	7,855,200	7,876,226	8,490,000	8,385,582	509,356
January .....	7,437,000	7,361,432	8,630,000	8,449,386	1,087,954
	67,196,900	67,146,359	74,547,500	74,287,541	7,141,182

## C.

*Receipts and Disbursements on account City Gas Works for  
fiscal year ending January 31st, 1873*

MONTHS.	Received for Coke, &c.	Received for Gas.	Disbursed for Coal.	Disbursed for Expenses.
1872—February.....	\$1,361 67	\$16,374 16	\$4,049 83	\$8,716 09
March.....	900 00	14,577 07	9,028 55	7,782 49
April.....	538 60	13,673 64	7,505 76	5,840 54
May.....	549 08	11,189 11	4,313 92	7,756 04
June.....	430 32	9,229 85	4,328 32	12,542 50
July.....	278 68	8,249 97	3,482 32	7,497 50
August.....	277 82	7,241 06	2,507 20	11,969 41
September.....	459 00	8,071 21	1,934 85	1,376 59
October.....	560 10	12,133 35	.....	6,868 87
November.....	701 11	15,835 08	2,919 84	6,912 56
December.....	1,010 93	16,430 84	5,442 59	7,213 12
1873—January.....	1,718 58	19,005 61	7,437 57	8,576 06
Delinquent Bills..	.....	1,037 03		
	\$8,785 89	\$153,047 98	\$52,950 75	\$93,051 77

\$12,648 60 paid United States Revenue Tax, included in expenses above.

**COMPARATIVE.**

	1871.	1872.
Received for Coke, &c.....	\$ 6,386 41	\$ 8,785 89
Received for Gas.....	145,580 63	153,047 98
Paid for Coal.....	53,859 04	52,950 75
Paid for Expenses.....	81,993 88	93,051 77

*Paid United States Revenue Tax as follows :*

1872—February.....	\$1,487 40
March.....	1,260 84
April.....	1,244 22
May.....	1,089 92
June.....	5,440 35
July.....	1,064 65
August.....	1,061 22
	<u>\$12,648 60</u>

J. B. ROYSTER, *Auditor.*

AUDITOR'S OFFICE, Feb. 10th, 1873.

## D.

## MISCELLANEOUS.

	1871.	1872.
Expended on account of "Construction" and "Extension of Gas Works" .....	\$10,773 66	\$23,641 72
Received for "Metre Connections" .....	927 49	1,041 07
Expended for "New Gas Holder" .....	67,061 35	23,308 61
Expended on account of "New Purifying House" ....	3,293 61	9,907 99
Expended in payment of United States revenue tax on gas manufactured, charged to "Expenses Gas Works" .....	7,508 18	12,648 60
United States Tax—February .....	\$1,487 40	
March .....	1,260 84	
April .....	1,244 22	
May .....	1,089 92	
June .....	*5,440 35	
July .....	1,064 65	
August .....	1,061 22	
		\$12,648 60

J. B. ROYSTER, *Auditor.*

AUDITOR'S OFFICE, February 10th, 1873.

\* The INCREASED payment in June, was in consequence of ERRONEOUS tax on previous years.

## E.

## STREET MAINS

*Laid from the commencement of the Works, to January 31st,  
1873.*

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	Feet.
2-inch.....	7,920
3-inch.....	117,503
4-inch.....	54,185
6-inch.....	20,791
8-inch.....	1,947
10-inch.....	3,901
12-inch.....	2,440
14-inch.....	6,338
20-inch.....	229
Total number feet.....	215,254

Total number miles laid in pipe..... 40 Miles, 4,054 Feet.

ANNUAL REPORT

OF

THE CHIEF OF POLICE

OF THE

*CITY OF RICHMOND,*

FOR THE

*Fiscal Year ending January 31, 1873.*



# ANNUAL REPORT

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OFFICE CHIEF OF POLICE,  
RICHMOND, February 1st, 1873.

*Hon. A. M. Keiley, Mayor :*

SIR—I have the honor to herewith submit for your consideration, my third Annual Report, embracing the workings of the Department for the year ending January 31st, 1873.

The Police Force consists of eighty-four officers and men, as follows :

JOHN POE, JR., Chief, office 17th and Main street.

WALLACE WASHINGTON, Clerk, Chief's office.

Dr. C. W. P. BROCK, Surgeon, 7th and Grace streets.

## FIRST POLICE DISTRICT.

Captain James M. Tyler, office First Police Station.

Sergeant J. B. Pleasants.

Sergeant W. B. Whitlock.

Sergeant B. F. Howard.

Acting Sergeant Dan'l Wren.

Wm. C. Bailey, Houseman at night

G. J. Brooks, Houseman in day.

R. B. Franklin, Beatman.

W. T. Bibb, do.

John H. Gill, do.

Geo. H. Matthews, do.

Samuel Michaels, Beatman.

Peter O'Connor, do.

Jones A. Otey, do.

A. J. Tyler, do.

Wm. H. Shields, do.

G. C. Gregory, do.

W. T. Goodman, do.

Albin Burnett, do.

B. E. Poitieux, do.

Thos. A. Allen, do.

Jacob W. Rex, do.

L. W. Harmon, do.

John Keegan, do.

Jas. P. Jeter, do.

Jno. H. Warren, do.

John Ogilvie, do.

#### SECOND POLICE DISTRICT.

Captain John Disney, office Second Market.

Sergeant R. T. Seal.

Sergeant Geo. W. Folkes.

Acting Sergeant John T. Hall.

Acting Sergeant John D. Perrin.

Henry Schnabele, Houseman.

Henry Charter, Beatman.

W. G. Toler, do.

Clinton DePriest, do.

Philip Shea, do.

Jno. N. Hobson, do.

W. F. Rogers, do.

Leroy Barefoot, do.

Wm. Pfaff, do.

John Finnegan, do.

Geo. Fox,	Beatman.
E. H. Hicks,	do.
E. P. Hulce,	do.
Jno. E. Moody,	do.
Geo Koch,	do.
A. T. Walton,	do.
Chas. H. Sweeney,	do.
Andrew Clark,	do.

## THIRD POLICE DISTRICT.

Capt. Chas. H. Epps, office Marshall St. and Brook Ave.  
 Sergeant Thos. B. White.  
 Sergeant A. J. James.  
 Sergeant R. N. Thomas.  
 Sergeant Dudley Gilman.  
 Jos. Faudree, Houseman.  
 A. R. Cousins, Beatman.  
 W. J. Orrange, do.  
 Louis M. Carter, do.  
 S. T. Hulce, do.  
 B. M. Angle, do.  
 W. W. Rowe, do.  
 W. L. Thomas, do.  
 H. W. Dabney, do.  
 D. R. Carter, do.  
 J. D. McCloskey do.  
 M. O'Grady, do.  
 Wm. Shepperson, do.  
 John Krausse, do.  
 Marcellus Hicks, do.  
 C. W. Gentry, do.  
 J. A. Cosby, do.  
 R. P. Blackburn, do.  
 C. R. Jones, do.

Sergeant E. H. Chalkley, Officer at Police Court.

Wm. F. Knox, Detective, office opposite Chief's office.

K. O'Dwyer, do. do. do.

Pat. Woods, do. do. do.

Jno. Wren, do. do. do.

Detailed by order of Council, and report daily for duty,  
under Dr. Cabell, President of Board of Health:

Wm. J. Whitt,

Wm. Orme,

W. N. Smith.

The following changes have taken place in the force during  
the year:

Number of men resigned.....	3
Number of men discharged.....	1
Number of men died, (T. B. Smoot).....	1
	—
Total.....	5
Number of men appointed.....	5
Number of days lost by sickness.....	1,235
Number of days lost by furlough.....	153
Number of days lost by suspension.....	60
	—
Total.....	1,448

Private John Finnegan lost forty-three days from a wound  
received while in discharge of his duty.

Number of arrests made.....	6,121
Whites.....	2,735
Colored.....	3,386
	—
Total.....	6,121

For Felony.....	338
For Misdemeanor.....	5,783
	<hr/>
Total.....	6,121
Number of Ordinance violations reported.....	1,652
Number of alarms of fire given.....	65
Number of horses, mules and cows found at large, and restored to owners.....	170
Number of lost children found and restored to pa- rents.....	110
Number of doors found open and secured.....	139
Amount of stolen property recovered.....	\$4,507 00
Amount of money taken from and returned to prisoners.....	\$4,952 00

You will doubtless agree with me, in thinking the Police remarkably fortunate in having been able to preserve order in so large a territory as is now embraced in the city of Richmond.

The First Police District extends from corporation line east, to Fourteenth street west, and from corporation line north, to James River south, and embraces about 185 squares built upon, besides a large area of unoccupied property, and is guarded by twenty-seven officers and privates.

The Second Police District extends from Fourteenth street east, to Fourth street west, and from corporation line north, to James River south, and contains about 117 squares, solid built, besides a small unoccupied territory. As this district contains almost all the large business houses and banks, I thought it right to make the beats smaller, therefore it is guarded by twenty-three officers and privates.

The third Police District extends from Fourth street east, to corporation line west, and from corporation line north, to

same south. This district contains about 175 squares, besides Hollywood and the City Almshouse, and like the First District, a very large thinly built territory, which is guarded by twenty-four officers and men.

Total number of squares.....	477
Average number squares to night beat.....	17
Average number squares to day beat.....	34

In addition to what has already been reported, the Police force have to light and put out over 1,000 street lamps each night, besides having to furnish details to preserve order at churches, weddings, funerals, balls, concerts, theatre, at fires, parades and elections, and they have succeeded in giving satisfaction to all parties asking their presence and assistance.

In conclusion, I feel it my duty to ask an increase of the Police force, notwithstanding our *good fortune* in preventing crime and disorderly conduct in the city for the past twelve months.

Respectfully submitted,

JOHN POE, JR.,  
*Chief of Police.*

ANNUAL REPORT

OF THE

CHIEF ENGINEER OF THE FIRE DEPARTMENT

OF THE

*CITY OF RICHMOND,*

FOR THE

*Fiscal Year ending January 31, 1873.*



# REPORT.

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OFFICE OF CHIEF ENGINEER,

RICHMOND FIRE DEPARTMENT,

February 1st, 1873.

*Hon. A. M. Keiley, Mayor :*

DEAR SIR—In accordance with the requirements of an ordinance passed November 11th, 1872, I have the honor to hand you my Third Annual Report, containing the name, age and residence of each fireman, the number and location of fires occurring during the year, the causes thereof, the names of the owners of property destroyed, the amount of insurance, and the names of insurance companies sustaining losses, so far as they could be ascertained.

As my report of last year to the City Council extended to the month of May, I suppose it is only necessary to date from that time to the present.

During these nine months, the Department was called out forty-eight times—once to inspection, twice to false alarms, three times to fires out of the city, five times to explosion of kerosine lamps, twenty-seven times to burning chimneys and small fires, and ten times to fires of more importance.

The loss by fire for the period above mentioned, amounts to \$80,330 upon which insurance to the amount of \$59,768 was paid. Some insurance companies lost nothing, and others very trifling amounts, during this time.

I am pleased to call your attention to this small loss, and point with pride to our Fire Department, which I consider equal to the best in this country. I must, however, confess to you, that our firemen are performing their laborious and dangerous duties under many disadvantages. The want of

an alarm bell that can be heard all over the city, at any time, day or night, is a very serious inconvenience ; in consequence of this, it has occurred at fires that not more than one-half of the men were out. In this connection there is another matter that should now engage the attention of the City Council—it is the building of a house and the establishing a hose company in some more central location. Up to about fifteen years ago, nearly all the apparatus belonging to the Fire Department was located south of the Capitol Square, and between 9th and 12th streets. Why it was removed, thus leaving the heart of the city, where the large buildings are, and the large and valuable stocks of goods are kept, without one single company for immediate action on a fire, where one moment's delay might be attended with such fearful results, I have never been able to learn. I would recommend, now, before real estate increases any more in value, the purchase of a suitable lot somewhere in the same locality, and the organization of a company ; they would not require a steam engine—the force of water in this district, to which they would direct their special attention, would be strong enough to afford one or more good streams, which would be of incalculable service (if they did not stop many fires) before the streams could be brought to bear. This building could be so constructed as to have this large alarm bell placed upon it, to be struck by the Electro Mechanical Bell Striker ; so that fireman and citizen could easily decide upon the box from which the alarm proceeds.

The engine house on 18th street is in an unsafe condition—the walls being cracked—and was *never* suited for a steam fire engine company, although two hundred dollars rent is paid per annum for an adjoining lot. I would recommend the purchase of a lot and the erection of suitable buildings for this important company.

A full supply of good hose is a matter of great impor-

tance to all well governed fire departments. We recently received two thousand feet, which were given to two of the companies; but we have yet two companies with old hose that cannot be relied on, and may, at any time, by their bursting, not only cause great trouble to the firemen, but, by the delay in replacing them, cause a very destructive fire. I also present you a report from Mr. J. R. Dowell, Superintendent of the Fire Alarm Telegraph, which continues to give entire satisfaction; indeed, it is now indispensable to our success. I hope your Honor will consider favorably the suggestions here made, and if consistent with your views, urge them upon the consideration of the City Council. I regret that they necessitate the outlay of so much money, but would suggest that we have in the Fire Department a body of men devoted to their work, who hesitate not, when the alarm of fire is sounded, to rush to the rescue of persons and property in peril; and what we ask for is only that we be granted those aids and appliances, with which we can more successfully cope with the fiery destroyer that so often visits our cities.

In closing, allow me to thank you and the members of the Fire Committee, for the interest taken in everything conducive to the welfare of the department; to the police, for their timely and efficient service, and to the officers and firemen of the department for the faithful manner in which they have performed their arduous duties; with the wish that the same zeal and devotion to duty that has been so noted may continue, so that citizens may feel assured that, important as are our duties, they are entrusted to worthy hands, and no fears need be entertained of our successful performance of them.

Respectfully submitted,

GEO. A. AINSLIE,  
*Chief Engineer.*

# STATEMENT OF FIRES, &c.

302

DATE.	TIME.	Box	OWNER.	LOSS.	INSURANCE.	CAUSE.
1871.						
Sept. 16..	5.30 A. M.	24	F. H. Rahm,	None,	.....	Chimney on Fire.
" 20..	7.30 A. M.	7	Ann Shannah,	\$50 00	.....	Stove in kiln.
" 30..	1.25 A. M.	12	Arthur Rooney,	500 00	Va. Home Insurance Company,	\$500 00
Oct. 16..	11.30 P. M.	24	James Bruce,	200 00	.....	Unknown.
" 21..	9.30 P. M.	24	.....	25 00	.....	Sparks from chimney.
" 22..	7.00 P. M.	12	.....	None,	.....	Chimney on fire.
" 23..	9.00 P. M.	2	.....	"	.....	Explosion kerosine lamp.
" 24..	7.00 P. M.	2	.....	"	.....	False alarm.
" 25..	5.00 A. M.	32	—— Westwood,	20 00	.....	Lime getting wet.
" 25..	1.20 P. M.	6	Amanda Holmes,	100 00	Richmond Banking & Ins. Co.,	32 00
Nov. 6..	6.45 P. M.	2	F. H. Rahm,	4,000 00	J. H. Claiborne & Co., Agents,	3,200 00
" 13..	9.40 A. M.	2	Wm. E. Granger,	50 00	.....	Accident.
" 17..	11.15 A. M.	4	.....	None,	.....	Sparks from stove pipe.
" 29..	8.00 P. M.	2	S. G. Fairbanks,	2,500 00	Mutual Society of Virginia,	2,273 00
Dec. 4..	8.30 P. M.	3	Mrs. Powell,	25 00	J. H. Claiborne & Co., Agents,	.....
" 11..	7.30 P. M.	13	.....	.....	.....	Furnace pipes.
" 12..	6.45 P. M.	25	.....	.....	.....	False Alarm.
" 9..	4.00 A. M.	7	Dennis O'Day,	200 00	D. N. Walker & Co., Agents,	200 00
" 17..	2.15 A. M.	36	Tredegar Company,	50 00	.....	Chimney on fire.
" 24..	7.00 P. M.	6	Geo. Volker,	50 00	T. M. Alfriend & Son,	50 00
1873.						Pop-crackers.
Jan. 6..	11.35 P. M.	43	Architectur'l Iron Works.	800 00	Va. Fire and Marine,	.....
			.....	.....	Mutual Assurance Society of Va.,	.....
			.....	.....	Merchants and Mechanics,	.....
			.....	.....	T. M. Alfriend & Son,	.....
" 8..	6.30 P. M.	2	Julius Kracker,	20 00	R. T. Brooke, Agent,	800 00
" 9..	11.55 P. M.	12	Ellen Welch,	1,200 00	Mutual Assurance Society of Va.,	10 00
" 16..	7.00 P. M.	15	.....	None,	Old Dominion,	1,200 00
			.....	.....	.....	Rocket resting on roof.



## Committee on the Fire Department.

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GEORGE BARGAMIN, CHAIRMAN.

M. L. STRAUS,	W. H. SCOTT,
JAS. M. TALBOTT,	RO. KERSE.

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## Committee on the Fire Alarm Telegraph.

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JAMES M. TALBOTT,

P. H. STARKE,	CHAS. T. DAVIS.
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## Officers of the Fire Department.

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GEO. A. AINSLIE, CHIEF ENGINEER.

CAPT. S. H. HERNDON,	CAPT. G. R. MINOR,
CAPT. B. A. PURKS,	CAPT. G. W. TAYLOR,
CAPT. J. J. KING,	CAPT. M. T. PHILLIPS.

RICHMOND, VA., Feb. 15th, 1873.

*Captain George A. Ainslie,*

*Chief Engineer Fire Department:*

SIR—In presenting this, my Second Annual Report of the workings of the Fire Alarm and Police Telegraph, it affords me pleasure to say, that both have continued to work with abundant success, and so far as I am advised, with entire satisfaction to the Fire and Police Departments, since my last report.

I have now nothing special to refer to, except to renew my suggestions of last year for a division of our present Fire Alarm Circuit, and the introduction of the “Automatic Repeater” and “Electro Mechanical Bell Striker,” for reasons then fully set forth, and to which reference is respectfully invited.

In justice to all interests, I cannot too strongly urge the importance of these changes, and the addition of a greater number of Alarm Boxes placed upon the streets. No addition has been made to the extent of our system since April of last year, when we had the small number of only nineteen Street Boxes scattered at remote points over the entire territory of the city. Now, as then, large portions of this beautiful and growing metropolis is still exposed to the ravages of the devouring element, and the necessity for increased means of protection, by the addition of a larger number of Alarm Boxes, is too apparent to need argument.

We need not less than thirty additional Boxes at once; if, however, we cannot get that number now, then let us have

such proportion of them, without delay, as the means of the city will warrant.

In November last, a temporary change was made, in the removal of the box and call bell from the 6th street Station House, to another building near the corner of 5th and Marshall streets, where they are now, and will remain, until the repairs being made at the Station House are completed.

A careful examination of the Kerite or Insulating Wire placed between the Air Line and the Iron Boxes, revealed the fact a few months since, that the insulation, from the exposure to the weather, had become defective, and temporary interruptions to the working of the line was occasioned thereby. To avoid further trouble from this source, most of the boxes have been re-insulated, and I incline to the opinion that such renewal of the insulation will be required at least once a year in future with such material as is now in use.

The cost of maintenance for both the Fire Alarm and Police Telegraph, since my last report, may be found as follows:

For battery supplies.....	\$191 11
For cost of labor.....	16 14
For cost of livery to inspect lines.....	43 00
For cost of poles.....	6 50
	<hr/>
Total.....	\$256 75

For the battery supplies above enumerated, there yet remains unpaid and due to Mr. William H. Scott, of this city, the sum of \$33 40.

Our supplies now on hand are as follows:

- 270 pounds sulphate of zinc.
- 20 pounds sulphate of copper.
- 30 pounds mercury.
- 39 extra battery jars.

- 37 extra coppers.
- 180 extra screw posts.
- 34 extra battery zincs.
- 1 large battery jar.
- $\frac{1}{2}$  gallon sulphuric acid.
- 2 empty mercury flasks.
- 2 battery brushes.
- 74 pounds No. 12 galvanized iron wire.
- 1 extra call bell.

Aggregate value about.....\$180 00

Respectfully submitted.

J. R. DOWELL,  
*Supt. F. A. and P. Telegraph*

# STATEMENT

*Of the Name, Age and Residence of Members of the Fire Department.*

## COMPANY "A."

*Engine House, Broad street, between 9th and 10th streets.*

NAME.	AGE.	RESIDENCE.
Miles T. Phillips, Captain.....	49,	113 south 4th street.
A. N. Tinsley, Foreman.....	28,	North 5th street.
H. A. Davis, Policeman.....	44,	North 9th street.
J. B. Denegre, Hoseman.....	30,	426 Broad street.
J. J. Cordle, do. ....	41,	9th and Broad streets.
J. W. McDonough, do. ....	33,	Broad, bet. 8th and 9th streets.
George Dean, do. ....	27,	Broad and 1st streets.
Thos. H. Elam, do. ....	25,	Broad and 4th streets.
J. T. Wood, do. ....	23,	1116 Main street.
Arthur Fuqua, do. ....	26,	917 Broad street.
J. H. Morris, do. ....	24,	320 Eighteenth street.
T. J. Mathews, do. ....	23,	17th and Marshall streets.
T. J. Smither, do. ....	23,	18th and Venable streets.

## STATION MEN.

NAME.	AGE.	RESIDENCE.
O. E. Philips, Engineman.....	26,	Engine House.
J. O. Goode, Helper.....	41,	Do.
J. J. Powell, Hostler.....	33,	Do.

## COMPANY "B."

*Engine House, Third street, between Broad and Grace streets.*

NAME.	AGE.	RESIDENCE.
S. H. Herndon, Captain.....	49,	2d street, near Leigh street.
J. T. Pemberton, Foreman.....	43,	Jackson and Adams streets.
A. Zenter, Policeman.....	40,	Broad and Jefferson streets.
J. F. Glazebrook, Hoseman.....	48,	Marshall and Adams streets.
C. H. Graves, do. ....	34,	Duval and 1st streets.
H. C. Arnett, do. ....	38,	Broad street and Brook Avenue.
W. V. Glazebrook, do. ....	28,	Belvidere and Beverly streets.
C. H. Hudgins, do. ....	34,	Broad and Adams streets.
F. Emmenhauser, do. ....	46,	5th street, near Duval street.
C. Emmenhauser, do. ....	38,	Broad, bet. 7th and 8th streets.
T. J. Hutton, do. ....	51,	Marshall and Henry streets.
W. J. Tyree, do. ....	36,	Duval and Adams streets.
J. A. Carey, do. ....	32,	Duval and 1st streets.

## STATION MEN.

NAME.	AGE.	RESIDENCE.
John Miller, Engineman.....	30,	Engine House.
Horace Smith, Helper.....	42,	Do.
J. W. Hazelgroove, Hostler.....	27,	Do.

## COMPANY "C."

*Engine House, 18th street, between Main and Franklin streets.*

NAME.	AGE.	RESIDENCE.
B. A. Perks, Captain.....	45,	1811 Grace street.
Herman Paul, Foreman.....	39,	228 Seventeenth street.
A. F. Rogers, Policeman.....	33,	Federal and Cedar streets.
J. E. Allen, Hoseman.....	47,	1527 Main street.
H. Berkert, do. ....	39,	1075 Grace street.
A. P. Wheeler, do. ....	42,	18th and Broad streets.
W. R. Cottrell, do. ....	30,	West 17th street.
G. W. Paul, do. ....	28,	1075 Grace street.
C. Satterwhite, do. ....	22,	18th and Franklin streets.
Jeter Snead, do. ....	31,	18th and Main streets.
Peterfield Vest, do. ....	25,	25th and Leigh streets.
J. W. Fogg, do. ....	28,	1525 Franklin street.
G. W. Hatcher, do. ....	30,	18th and Main streets.

## STATION MEN.

NAME.	AGE.	RESIDENCE.
J. H. Anthony, Engineman.....	37,	Engine House.
S. Bailey, Helper.....	45,	Do.
Henry Vance, Hostler.....	32,	Do.

## COMPANY "D."

*Engine House, corner Marshall street and Brook Avenue.*

NAME.	AGE.	RESIDENCE.
J. J. King, Captain.....	45,	403 Marshall street.
G. W. Sublett, Foreman.....	47,	53 Fourth street.
J. A. Tyree, Policeman.....	39,	1000 Clay street.
W. J. Thomas, Hoseman.....	43,	15 Grace street.
J. H. King, do. ....	34,	446 Leigh street.
P. W. King, do. ....	47,	101 Marshall street.
E. Priddy, do. ....	35,	176 Duval street.
E. H. Kelly, do. ....	35,	519 Clay street.
W. T. Bowles, do. ....	38,	700 Clay street.
C. V. Glazebrook, do. ....	25,	418 Marshall street.
E. R. Isbell, do. ....	23,	306 Marshall street.
W. H. Tyree, do. ....	34,	9 Marshall street.
D. Gayle, do. ....	22,	519 Clay street.

## STATION MEN.

NAME.	AGE.	RESIDENCE.
B. Weber, Engineman.....	35,	Engine House.
R. T. Johnson, Helper.....	32,	Do.
J. R. Harris, Hostler.....	43,	Do.

## COMPANY "E."

*Hook and Ladder Truck House, Washington Hall.*

NAME.	AGE.	RESIDENCE.
G. R. Minor, Captain.....	40,	514 Marshall street.
J. T. Nowland, Foreman.....	24,	805 Grace street.
C. Bergheimer, Policeman.....	36,	6th and Broad streets.
C. L. Jones, Ladderman.....	25,	520 Marshall street.
J. G. Thomas, do. ....	35,	502 Marshall street.
W. Gallagher, do. ....	29,	915 Byrd street.
J. Newman, do. ....	33,	106 Clay street.
J. C. Gibson, do. ....	34,	1428 Franklin street.
G. W. Lee, do. ....	28,	424 Sixth street.
J. Loth, do. ....	30,	Madison and Clay streets.
A. T. Minor, do. ....	29,	412 Fourth street.
W. Cowardin, do. ....	29,	16 Ninth street.
R. Pleasants, do. ....	23,	917 Broad street.

## STATION MEN.

NAME.	AGE.	RESIDENCE.
John Mussen, Tillerman.....	35,	Truck House.
G. F. Jennings, Hostler.....	28,	Do.
J. Conway, Extra Man.....	38,	Do.

## COMPANY "F."

*Hook and Ladder Truck House, 25th Street, near Broad.*

NAME.	AGE.	RESIDENCE.
G. W. Taylor, Captain.....	30,	2310 Broad street.
W. H. Taylor, Foreman.....	25,	Engine House.
M. Meredith, Policeman.....	27,	27th and Leigh streets.
W. B. Smith, Ladderman.....	28,	25th and Leigh streets.
John Mackie, do. ....	28,	25th and Leigh streets.
E. T. Snead, do. ....	38,	22d and Pleasant streets.
W. J. Points do. ....	31,	22d and Pleasant streets.
A. J. Duesberry, do. ....	24,	22d and Broad streets.
A. Schmidt, do. ....	33,	25th and Broad streets.
S. T. Preston, do. ....	33,	25th and Broad streets.
E. Riddick, do. ....	22,	Engine House.
Wm. Moore, do. ....	26,	Engine House.
J. Armstrong, do. ....	35,	30th and Clay streets.



ANNUAL REPORT,

OF THE

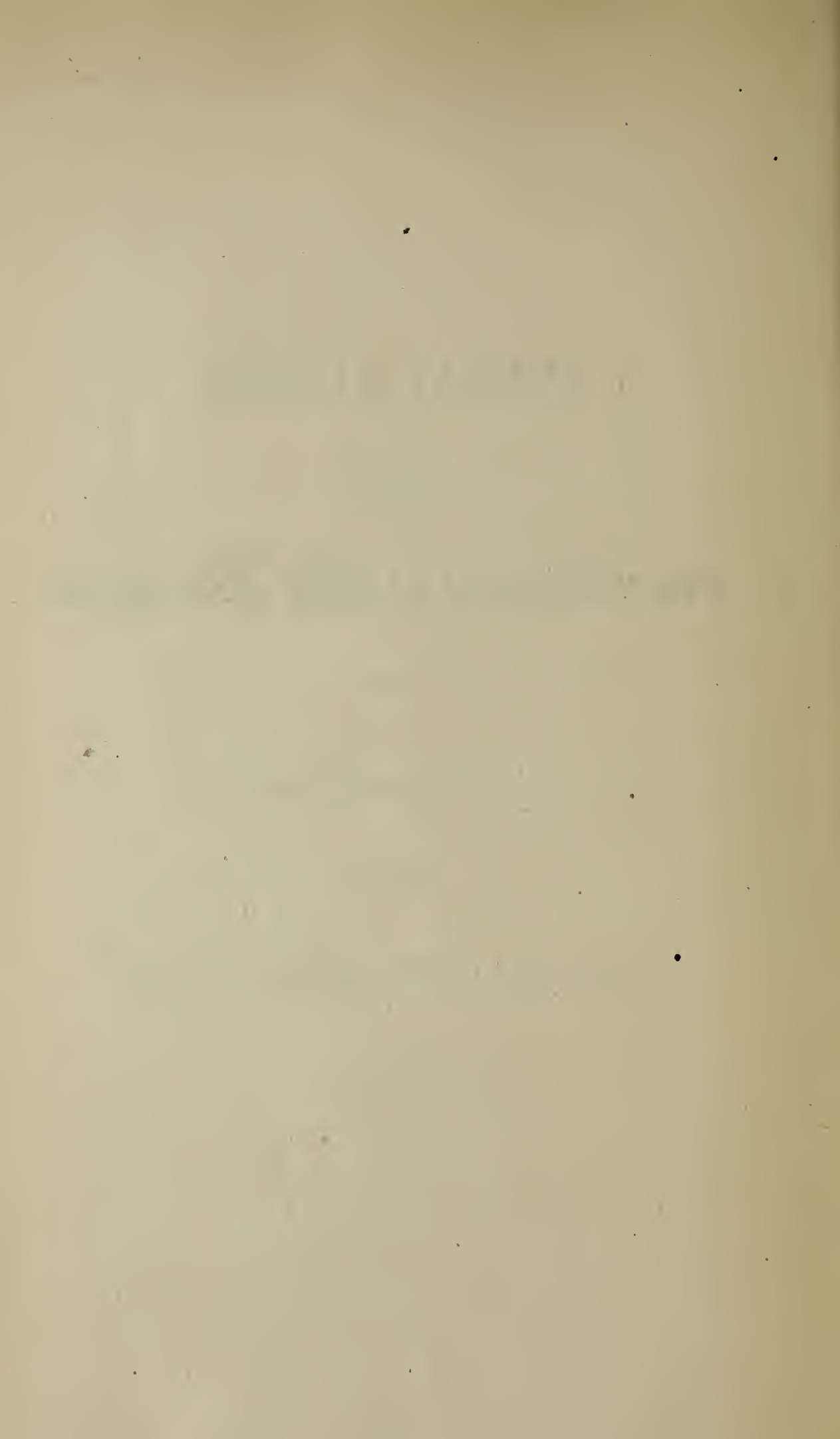
*Superintendent of City Almshouse*

AND

*Sub-Departments,*

FOR THE

FISCAL YEAR ENDING JANUARY 31st, 1873.



# ANNUAL REPORT.

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CITY ALMSHOUSE,  
SUPERINTENDENT'S OFFICE, Feb. 1st, 1873.

*Hon. A. M. Keiley, Mayor of the City of Richmond:*

SIR—I have the honor to submit herewith my report of the operations of the City Almshouse and the sub-departments connected therewith, for the fiscal year ending January 31st, 1873, as also list of officers and attaches, with amount of compensation allowed, expenditures, &c.

Very respectfully,

C. P. BIGGER, *Supt.*

## CITY ALMSHOUSE.

*List of Officers and Attaches on 31st January, 1873.*

NAMES.	POSITION.	SALARY.
Charles P. Bigger.....	Superintendent,	\$1,000 00 per year.
William J. Epps.....	Assistant Sup't,	720 00 "
J. S. D. Cullen, M. D.....	Physician,	1,200 00 "
Mrs. J. B. Poore.....	Matron,	500 00 "
Mrs. Caroline Drissell.....	Ward Mistress,	144 00 "
Lorenz Brunner.....	Baker,	720 00 "
Daniel Driscoll.....	Engineer,	75 00 per month.
John H. Parry.....	Steward,	15 00 "
Robert Winston.....	do.	12 00 "
Robert Gillen.....	Nurse,	10 00 "
Sarah Turner.....	do.	5 00 "
George Johnson.....	do.	2 50 "
Mary Williams.....	do.	2 50 "

The Superintendent, Assistant Superintendent and Matron are each allowed, in addition to their salary, house rent, fuel and lights; the Ward Mistress, Stewards and Nurses are allowed board, with room and lights.

The Physician, by authority of the City Council, appoints on the 1st day of March, of each year, two Students of Medicine, who live in the Institution and have charge of the Dispensary, compound prescriptions, and, under his direction, attend the sick. They are allowed board, lodging and lights at a cost not exceeding twenty-five dollars per month each.

## EXPENDITURES FOR ALMSHOUSE PROPER.

For subsistence.....	\$10,034 80
For property.....	825 34
For construction and repairs.....	1,847 44
For hospital department.....	2,937 66
For salaries.....	6,376 01
For clothing.....	2,159 00
For sundries.....	575 03
For fuel.....	2,759 62
For forage.....	746 42
For lumber.....	163 17
For printing.....	53 50
For stationery.....	112 00
	<hr/>
	\$28,589 99

The average number of inmates for the year was 237, who were subsisted at a cost of \$42 34 each, per year.

During the year four hundred and twenty-nine persons were admitted to the Almshouse, as follows :

## WHITE DEPARTMENT.

Men, 124; women, 62; children, 40.....	226
--	-----

## COLORED DEPARTMENT.

Men, 105; women, 79; children, 19.....	203
	<hr/>
	429

## DISCHARGED DURING THE YEAR.

## WHITES.

Men, 88; women, 52; children, 30.....	170
---------------------------------------	-----

## COLORED.

Men, 48; women, 36; children, 11.....	95
	<hr/>
	265

## DIED DURING THE YEAR.

## WHITES.

Men, 23; women, 9; children, 7.....	39
-------------------------------------	----

## COLORED.

Men, 43; women, 32; children, 6.....	81
	<hr/> 120
Number of inmates remaining February 1st, 1873.....	<hr/> 272

## NATIVITY OF INMATES RECEIVED DURING THE YEAR.

Ireland.....	37
Italy.....	18
Germany.....	11
England.....	7
France.....	6
Canada.....	2
Scotland.....	1
Nova Scotia.....	1
Unknown.....	2
United States.....	344
	<hr/> 429

## DEPARTMENT OUT-DOOR POOR.

UNDER CONTROL OF COMMITTEE FOR RELIEF OF POOR.

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*Officers and Employees, January 31st, 1873.*

CHAS. P. BIGGER, Superintendent, no extra compensation.

WM. J. EPPS, Ass't Superintendent, no extra compensation.

C. E. LIPSCOMB, Clerk, \$45 00 per month.

JONES ALLEN, Visitor, \$45 00 per month.

This Department is charged with the distribution of meal and fuel to the poor of the City outside of the Almshouse, also with the burial of the poor.

The meal ration is issued during the whole year ; the issue of fuel, during the winter months only.

During the period of issuing fuel, two young men are temporarily employed, one as clerk, to register applicants, and the other as visitor, or detective, whose duty it is to examine into the merits of the applications and by personal visits, satisfy the department that the party is entitled to relief. By the employment of this visitor, the department is protected in a great measure against imposition, and many worthy cases have been relieved, who would not otherwise have been brought to its notice. In the Spring and Summer the issue of meal is unattended by any additional expense, this being one of the duties of the Assistant Superintendent, with such assistance as can be rendered by some one of the inmates.

In April last the committee removed the burial of the indigents above-mentioned, but at a recent meeting they again

charged this department with that duty ; by this new arrangement, the cost of burial will not exceed the following prices : adults, \$1 50 ; children, 90 cents, (without transportation.)

This department does not claim to give, in any instance, entire relief, but only partial or temporary assistance—for all persons not provided for by friends and unable to provide for themselves, are considered proper subjects for the Almshouse, and must be cared for at that institution.

There have been but few complaints from parties receiving charity from this department during the year, and upon the receipt of such, an immediate investigation was ordered, resulting, in but one or two exceptions, in placing the blame on the party complaining ; but in the exceptional cases, where the blame was properly attributable to this department, the evil or fault complained of was speedily abated.

There have been issued during the year ending January 31st, 1873, two thousand three hundred and fifty-six bushels of meal, at a cost of two thousand four hundred and twenty-nine dollars and fifty-three cents, distributed as follows :

#### WHITES.

Men.....	552	rations—Average per week.....	11
Women.....	5,722	“ “ “ .....	110
Boys.....	1,192	“ “ “ .....	23
Girls.....	1,523	“ “ “ .....	29
Total.....	8,989		173

#### COLORED.

Men.....	2,022	rations—Average per week.....	39
Women.....	7,033	“ “ “ .....	135
Boys.....	92	“ “ “ .....	2
Girls.....	203	“ “ “ .....	4
Total.....	9,350		180

Showing an average daily issue of rations, as follows:

Whites.....	173
Colored.....	180
Total.....	353

There have been issued during the year ending January 31st, 1873, six hundred and forty-four cords of wood, at a cost of two thousand two hundred and fifty-four dollars.

This issue of wood is made to heads of families, most of whom have received one cord, distributed as follows :

Number of whites, 494 rations ; colored, 465 rations ; total, 959 rations.

WARDS.	WHITE.	COLORED.	TOTAL.
Marshall Ward.....	39	33	72
Jefferson Ward.....	130	36	166
Madison Ward.....	41	25	66
Monroe Ward.....	98	46	144
Clay Ward.....	73	106	179
Jackson Ward.....	113	219	332
	494	465	959

Total disbursements on account of this Department.....\$5,159 70.

## SHOCKOE HILL CEMETERY.

UNDER CONTROL OF COMMITTEE ON CEMETERIES.

*Officers and Employees, year ending Jan. 31st, 1873.*

CHAS. P. BIGGER, Superintendent, no extra compensation.

HARRY O'NEIL, laborer, \$50 per month.

JOHN CRONNIN, laborer, \$50 per month.

The Cemetery is at present in as good condition as could be expected, though it is susceptible of much improvement. The Superintendent will, at an early day, suggest to the committee such alterations and improvements as are at this time necessary, such as re-gravelling the walks and the introduction of several additional hydrants. These, with some other slight improvements, requiring but a slight outlay, will add much to its appearance. The city have no sections in the Cemetery to sell, all having been disposed of; nor is there now any space for public grounds, that portion allotted for promiscuous burials being entirely filled.

Total number of interments *in Cemetery* for year  
ending January 31st, 1873..... 238

The laborers employed, in addition to their duties  
in the Cemetery, are required to bury all the  
*colored* poor in the grounds adjacent; the num-  
ber of interments of this class for the year,  
amounted to..... 224

Disbursements for the year.....\$1,241 80

Receipts for the year..... \$686 75

## CITY HOSPITAL.

UNDER CONTROL OF THE COMMITTEE ON HEALTH.

*Officers and Employees, year ending Jan. 31st, 1873.*

CHAS. P. BIGGER, Superintendent, no extra compensation.

J. S. D. CULLEN, M. D., Physician, no extra compensation.

CHRISTOPHER TOMPKINS, M. D., Assistant Physician in charge of Hospital, \$5 per day.

H. A. DEITRICK, Nurse, \$25 per month, with board.

NELSON GREEN, Ambulance Driver and Nurse, \$25 per month, with board.

The Hospital is located on the city property, at Clark's Spring, and was opened for the reception of patients in December, 1871. The number of persons treated since that time to January 31st, 1873, are as follows :

White.....	11
Colored.....	8
Total.....	19

## DISCHARGED FROM HOSPITAL.

White.....	8
Colored.....	2

## DIED.

White.....	1
Colored.....	1

## NUMBER OF PATIENTS REMAINING.

White.....	2
Colored.....	5

Disbursements on account of Hospital..... \$3,883 27

The Hospital is comfortably furnished for the accommodation of ten patients, and every arrangement necessary, has been made by the Committee for the treatment of small-pox patients at the Hospital. There is at the Hospital an ambulance and horse for the transportation of patients, and, in addition, is used for removing the remains of parties dying of small pox in the City, and who are buried at the expense of the City.

The disbursements in this department may seem large for the period, and considering the number of patients treated. But it will be remembered that the Hospital had to be refitted, in fact, with the exception of *ten* iron bedsteads, it has been refurnished complete. It was deemed necessary, to have a conveyance strictly for the use of this department, on account of the contagion of the disease, and hence the purchase of the ambulance and horse. In addition to these extraordinary charges against this fund, as explained above, the public vaccinators have been paid in part for services from this appropriation, and the amount included in the disbursements; and also, under this head is charged the amount paid as a bonus to get possession of the property, it having been rented for the year.

In concluding this report, the Superintendent takes occasion to acknowledge the cordial and hearty support which he has received from the officers and employees of the several departments under his charge, and at the same time, return his thanks to the several committees for courtesies received.

CHARLES P. BIGGER,

*Superintendent.*

REPORT

OF THE

ENGINEER

OF THE

JAMES RIVER IMPROVEMENT,

FOR THE

Year ending December 31st, 1872.



# ANNUAL REPORT.

OFFICE ENG'R JAMES RIVER IMPROVEMENT,  
*Richmond, Va., Dec. 31st, 1872.*

COL. ALBERT ORDWAY,  
*Chairman Joint Committee :*

SIR—I submit the following report of operations for the improvement of James River, for the year ending this day. The expenditure covers a period of thirteen months, the committee placing the work under my supervision December 1st, 1871. At that date both dredging machines owned by the city were disabled, and it was the 5th of January, 1872, before I could get either of them ready for work.

The condition of the James River fund is as follows :

JAMES RIVER IMPROVEMENT,	Cr :	
Appropriated 14th February, 1870.....	\$10,000 00	
Appropriated, eight per cent. bonds, 31st January, 1871.....	250,000 00	
Cash from sundry sources, placed to credit of fund.....	4,718 91	
Premium on eight per cent. bonds sold.....	310 63	
	<hr/>	
Total amount of fund—(bonds and cash).....	\$265,029 54	
DEBITS :		
Discount, commissions and expenses on sale of \$150,000		
eight per cent. bonds.....	\$12,028 00	
Expended prior to the organization of Committee, and		
charged to fund.....	11,839 12	
Total expenditure since organization of Joint Committee,		
September 1st, 1870.....	182,107 31	
	<hr/>	
		205,974 43
		<hr/>
Amount to credit of fund 31st December, 1872....		\$59,045 11

Since December 1st, 1871, to date, the expenditure for  
all purposes has been.....

\$92,230 59

Distributed as follows :

Salaries and wages.....	\$31,786 29	
Repairs.....	9,727 01	
Fuel.....	3,504 93	
Office rent.....	127 66	
Material for dykes.....	9,098 57	
General expenses.....	2,487 04	
New Machinery.....	35,499 09	
	<hr/>	92,230 59
Deduct cost of new machinery and appliances....		35,499 09
		<hr/>
Making the working expense.....		\$56,731 50
Value of material on hand, and duplicates ready for use.....	\$4,125 00	
Work done for parties, not yet settled.....	4,714 00	
	<hr/>	8,839 00
		<hr/>
Making the net expense for thirteen months.....		\$47,892 50

For information of Committee I add, in detail, the expense  
of each machine and other elements of cost, viz :

For engineering, office expenses, rent, fuel, advertising, &c.....		\$4,385 76
Tug "Frank Somers :"		
Wages.....	\$3,605 37	
Material and repairs.....	1,369 26	
Fuel.....	926 20	
	<hr/>	5,909 83
Dredge No. 1, "Admiral Newport :"		
Wages.....	4,870 68	
Material and repairs.....	4,097 81	
Fuel.....	817 10	
	<hr/>	9,785 59
Dredge No. 2, "Greenwich :"		
Wages.....	5,049 47	
Material and repairs.....	1,712 51	
Fuel.....	771 65	
	<hr/>	7,533 63
Dredge No. 3, "City of Richmond," 3½ months :		
Wages.....	1,384 94	
Material and repairs.....	319 55	
Fuel.....	150 60	
	<hr/>	1,855 09

“Hoisting Machine :”

Wages.....	3,361 06	
Material and Repairs.....	780 70	
Fuel.....	454 17	
	<hr/>	4,595 93

Pile Driver and Dykes :

Wages.....	9,726 60	
Material, repairs and appliances.....	10,117 96	
Fuel.....	343 07	
	<hr/>	20,187 63
General expenses.....		2,487 04
		<hr/>

Total, as per previous statement..... \$56,731 50

In detail, the machines have worked as follows :

Dredge No. 1, “Admiral Newport,” dredged.....	206 days.
Time lost on account of freshets, snow, ice and holidays.....	38 “
Time lost in making repairs to machinery and hull.....	70 “

Total working time..... 314 “

Amount of time lost, 34 per cent.

Dredged during the time, 24,204 cubic yards.

Dredge No. 2, “Greenwich,” dredged.....	227 “
Time lost on account of freshets, ice, snow and holidays.....	30 “
Lost for repairs.....	57 “

Total working time..... 314 “

Time lost, 27½ per cent.

Dredged during the time, 29,946 cubic yards.

Dredge No. 3, “City of Richmond,” commenced work 17th September, dredged.....	75 “
Lost on account of snow, ice and holidays.....	13 “
Lost to replace broken spade.....	1 “

Total working time..... 89 “

Time lost, 15½ per cent.

Dredged during time, 9,725 cubic yards.

“Hoisting Machine,” depositing dredged material behind dykes.....	264 “
Time lost, when machine could not work.....	29 “
Time lost for repairs.....	21 “

Total working time..... 314 “

Time lost, 16½ per cent.

Total material dumped behind dykes, 36,519 cubic yards.

Tug "Frank Somers," towing lighters, rafts, dredges, &c., &c.....	292	"
Time lost by ice and holidays.....	5	"
Repairing machinery and hull.....	17	"
	<hr/>	
Total working time.....	314	"
Time lost, 7 per cent.		

The force on the Pile Driver worked on the dykes as well as at moving the material behind the dykes, as piles could only be driven on flood tides. At no time, therefore, was a full day's work made. This account I am unable to itemize.

Since the work was placed under the charge of the Joint Committee, \$72,049 29 has been expended in the purchase and construction of machines and other appliances indispensable to the efficient conduct of the work. The value of machinery on hand and turned over to the present organization, was, on July 1st, 1871, \$17,894 17; making the cost of the machinery now on hand, \$89,943 46. The repairs and improvements that have been made to the various machines, should be taken in connection with the enhanced cost of machinery of all kinds—showing that the above sums do not represent the full value. One hundred thousand dollars would not now provide as complete and efficient an outfit. The machinery is all in No. 1 working order.

You will observe that the total amount of material handled by the dredges, is 65,875 cubic yards; making the cost per cubic yard, including all expense, about 72 cents.

Of the above amount of dredging, 4,965 cubic yards have been removed for private parties, in improvements made in the harbor; 17,677 cubic yards of the aggregate were placed behind the dykes by the dredging machines. The remainder, 43,231 cubic yards, were excavated from the main channel which has been opened from the lower end of Rocketts reef to the Brick Yard wharf, 1,900 feet distant. This channel is ninety feet wide, and at mean high tide affords not less

than sixteen feet water. Much of the distance affords full eighteen feet at mean high tides. Heretofore this was the shoalist reach in the river—at low tides, for a considerable distance, affording not more than seven feet water, and at mean high tides, not over ten feet eight inches.

The general character of the material through which this channel has been dredged, consists of ledges of decayed granite, interspersed with thin strata of solid rock, the ledges crossing the river at distances varying from fifty to seventy-five feet apart. Between these ledges large masses of granite, boulders and gravel were packed so closely as almost to equal solid rock, in the difficulty attending their removal. Two hundred and twenty-one pieces of rock, varying from one-half to five cubic yards, were removed, that required the service of divers to sling them so they could be carried ashore, besides large masses that were lifted with the dippers. This caused the loss of much time, and added materially to the cost of the work. Through the reach no dredging had ever been done, and until January last, when its hard character was developed, it was supposed to be sand, gravel and ordinary river silt. It proved, however, hard work and tedious of execution.

The United States Engineer officer in charge of the department, decided to apply a portion of the appropriation in hand to dredging. This reach was selected as being the most difficult of execution. Bids were extensively advertised for, and the lowest bid per cubic yard was \$1.50, the city to furnish dykes for deposition. The other proposals were to furnish specified amounts of machinery at prices per day, that would make the price fully as high as the bid per cubic yard.

Arrangements mutually advantageous have been concluded by the Committee, and the United States Engineer officer in charge of the department, by which the cost of this hard

work will be greatly reduced to the city, and with the certainty that the greatest amount of work possible will be accomplished by the portion of the appropriation applicable to dredging.

Some points in this channel were so hard that the dredges could make no impression on them. To secure the full depth of eighteen feet at high tides, it will be necessary to use explosives to loosen the material before it can be dredged. These points are not numerous or extensive.

You will observe that the repairs have been very heavy. The frequent inspections you have made of the operations, and the work required of our machines, have satisfied you, that if the work was to be accomplished by dredging machines, heavy expense was unavaoidable. The advance in price of iron has also added largely to the cost of repairs. The "Greenwich," an old machine, was favored as much as possible. The "Newport," delivered from Philadelphia in the spring of 1871, was supposed to be peculiarly adapted to this heavy work. I soon found it necessary to discard its dipper of two cubic yards capacity, and substituted one of half the capacity. With that, it was at last so disabled as to require a thorough overhauling—making the expense for its repairs, \$4,097 81, nearly one-third its original cost. With the improvements introduced and general repairs made, I consider it a stronger and more efficient machine than it was when first delivered here.

The new dredger, "City of Richmond," constructed under my supervision, commenced work on the 17th of September, and excepting one day lost to replace a broken spade, has lost no time for repairs. This machine has operated steadily in the hard material, with a dipper of 2 cubic yards capacity. It is a very powerful and admirably built machine, reflecting much credit on the mechanical skill of Mr. Fox, the builder,

as well as that of the other Richmond mechanics, employed in its construction.

The material dredged has all been placed behind dykes, there being no deep water in the vicinity that could be used for its deposition. The necessity for these dykes enhances the cost of the work, though their construction permanently improves the river, and we know that material placed behind them will not again have to be dredged from the channels. The hard dredging continued some distance below the brick-yard wharf. After passing the mouth of Almond Creek, the character of the material to be removed changes, being sand, gravel and the ordinary river silt. Such material can be rapidly and cheaply removed. It has not heretofore been advisable to operate on these lower reaches until the hard one just below the city was opened, this being the key to the harbor of Richmond. It has now been successfully demonstrated that it can be accomplished by dredging, and in a short time, will afford easy access to the harbor and dock. I have no doubt, that the United States Engineering Officer in charge of the Department, will apply such portion of the next appropriation made by Congress, to opening the channel through the Randolph flats, a continuation of Richmond bar, so that during the coming year, I hope to see vessels drawing fifteen feet of water reach the city.

The shoalest water now on the river, is from opposite the mouth of Almond Creek to the lower point of Drury's Island, affording at ordinary tides from twelve and a half to thirteen feet water.

The mean rise and fall of the tide at Rocketts, is 3 min. and  $8\frac{1}{4}$  sec., this result is arrived at after eighteen months of half hour observations, on all days, when the river was in its normal condition.

On mean high tides, vessels drawing  $12\frac{1}{2}$  feet water can reach Richmond without difficulty.

Satisfactory arrangements have been concluded with the owners of the property, and a dyke is under construction that will close the channels passing between Drury and Coal Islands and the Chesterfield shore. Space will be thus obtained for depositing a large amount of dredged material, and the necessity for rehandling avoided.

The waste of a large amount of water will also be prevented by this improvement. The improvements already made are exerting a salutary effect on the tides, as I observe that the duration of the flood tide is increasing.

The thorough removal of the obstructions at Warwick Bar and Drury's Bluff, have restored the river to its natural condition. The river at Drury's Bluff was practically dammed, and while the obstructions remained we never had a low tide above them. Since the removal, the tides have resumed their regular ebb and flood. It has been inferred by many persons that the opening of Dutch Gap Canal was the cause of the low tides. Dutch Gap is eighteen miles from Richmond; when it is ebb tide at Rocketts, the tide has been flood nearly an hour at Dutch Gap. Below Rocketts the velocity of the water is but little over two miles per hour, and the difference between the duration of the ebb and flood tides is about two hours; hence water passing Rocketts at the beginning of the ebb will meet the flood tide between Warwick's and Drury's Bluff. My observations make the mean rise and fall of the tide greater than the observations of the coast survey, and a little less than Mr. Gill, as I find he was four feet as the mean rise and fall in his surveys. I believe the difference is caused by the great waste of water between Richmond and City Point. During the war no attempt was made by the farmers to keep up their dykes—others were destroyed in aid of military operations, so that now nearly seven thousand acres of land are submerged from  $1\frac{1}{2}$  to 3 feet

twice each day. The amount of water on that surface would make a depth of nearly thirteen inches from Richmond to City Point. Closing these dykes once more would make the flood tides stronger in their flow and of longer duration, consequently they would rise higher.

I would suggest that the Council be asked to have some improvement made to prevent waste earth deposited in the valley of Shockoe Creek from washing into the river. Especially between Broad and Franklin streets is this improvement needed. In that short distance the course of the creek is very tortuous, at points turning almost at right angles. The valley of Gillie's Creek needs provisions looking to the same end.

The natural wash from these streams we must expect to remove from the river, then we can approximate with some degree of accuracy the cost. For improvements to hold the material in the creeks, without elaborate surveys and estimates, I can name no sum that I would think sufficient for the improvement. After all, any improvement that may be made to prevent the natural wash finding its way to the river, will be only temporary in the relief afforded. I have tried on the mountain section of the canal works similar to those prepared for these creeks, and after a very few years they failed to afford any relief from the sand moved by the streams. The natural deposit of these streams is as a drop in the ocean, when we see the Rivanna, Hardware, Rockfish and Tye rivers, and in fact, all the affluents of the upper James, pouring their debris in the river.

The river once in good order, I am satisfied that an annual expenditure not exceeding \$15,000 will keep it so. In this opinion I am sustained by Col. Wm. P. Craighill, United States Engineer Officer in charge of the department. In his first report on James river he recommends an annual appro-

priation of \$15,000 for the purpose of keeping the river in good condition. Considering the trade that is now accommodated by the river, and the great increase that will surely reach it during the year, the amount is insignificant when compared with the benefits.

During the year, the operatives of the United States Engineer Department have been confined to opening a good and sufficient channel through the Rocketts reef. This reef is 460 feet long, beginning nearly opposite Orleans street and ending opposite the James River Brewery. A channel seventy feet wide, and now with not less than sixteen feet water at mean high tides, has been excavated. Over much of the space the depth now exceeds eighteen feet at mean high tides. In one month of good weather for submarine work, a uniform depth of eighteen feet will be secured, and the channel thrown open to general use. The south-side of the channel will then be excavated—the most exposed points have been drilled and are now ready for blasting. A large mass of rock, opposite the Old Dominion Company's wharf, was blasted and removed. The ledge just above Gillie's Creek, a serious inconvenience to vessels seeking the upper part of the harbor and dock, has been drilled and will be blasted and removed as soon as the new channel through the reef is ready for general use. The wrecks of the "Patrick Henry" and "Ben Sheppard," opposite Orleans street, have been raised and destroyed. The divers of the government have been of great assistance to the city in slinging the large masses of rock encountered in dredging. The city machines, in furtherance of the operations of the United States Engineers, have been used so as to reduce the cost of the work and expedite its completion.

Capt. Thos. Cunningham, of the tug Somers, has been very efficient in the discharge of the various duties incident to his position, and has been of great assistance to me.

Mr. Randolph, the clerk, has discharged his duties to my entire satisfaction.

The superintendents of the various machines have generally given me satisfaction.

I believe I have omitted nothing in this report that will give a clear insight into the operations inaugurated and carried on by the United States and City for the improvement of James River.

I am, very respectfully,

W. G. TURPIN,  
*Engineer James River Improvement.*









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